Lectures

ON SOME

IMPORTANT POINTS IN CONNEXION WITH THE

SURGERY OF THE URINARY ORGANS.

Delivered at the Royal College of Surgeons,

BY SIR HENRY THOMPSON, F.R.C.S.,

SURGEON EXTRAORDINARY TO HIS MAJESTY THE KING OF THE BELGIANS, PROFESSOR OF SURGERY AND PATHOLOGY TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL, EMERITUS PROFESSOR OF CLINICAL SURGERY, ETC.

LECTURE V.

The Progress of Operative Surgery for Stone during the Present Century, with the most Recent Improvements in Lithotrity.

[THE lecturer commenced by remarking that amidst the progress made in art and science during the present century surgery was not less distinguished than other branches, of which the recent history of operation for stone afforded a complete illustration. A minute historical outline, commencing with the lithotomy practice, provincial and metropolitan, at the end of the eighteen century, described the advent of crushing, and the various improvements as they arose both in the cutting and the crushing methods as they competed with each other in the middle of the present century, until the lithotrite began gradually to supersede the use of the knife. It was interesting to observe how the idea of rendering lithotrity complete at a single operation had slowly been developed even from the time of Heurteloup, who had laboured hard to realise it, until its recent accomplishment in modern times. The lecturer continued]:—

Thus far it has been my object to make a rapid sketch of the general practice in relation to the surgical treatment of calculus in the chief capitals of Europe up to within about the last five years. But in 1878 Professor Bigelow of Harvard, U.S., proposed a further and a considerable advance in regard to the amount of crushing and aspiration which might be employed at a single sitting. Whatever the size or the nature of the stone, provided only that it was deemed to be within the compass of our power to crush, he advocated, on principle, that the whole should be removed at once, and no portion be permitted to remain, so far as the operator knew, for a second attempt. The principle enunciated was, that broken fragments remaining in the bladder were more injurious to it and more dangerous to the patient, by causing cystitis &c., than a prolonged sitting and a very considerable amount of mechanical interference expended on the task. This apparently bold proposal took many by surprise. It was not that the removal of a calculus at a single sitting was by any means a novelty in itself; small ones had been often thus disposed of. It was the proposal to deal with stones of very considerable size, and the prolongation of the sitting from a short term of minutes to one which might, according to the Professor's experience, occupy two hours, or even more, which naturally aroused much question. Nevertheless, I must avow that my experience of the value of removing all the fragments from a bladder when acute cystitis was set up had disposed me to receive the new doctrine with favour. Hence I at once put it to the test, and, without any change of instruments, proved its value in the first twenty cases which I treated by this method. Professor Bigelow had, however, made a further proposal—namely, that much larger and more powerful instruments, both lithotrites and evacuating tubes, should be employed than heretofore. These proved to be, for the most part, not only unnecessary, but to be sources of danger, especially in unpractised hands. The American surgeons had long been accustomed to use instruments in the treatment of stricture larger than those generally employed on this side of the Atlantic; and this fact has had the advantage of facilitating the production of Professor Bigelow's proposal. No doubt heavy and powerful crushing machines become absolutely essential to success in dealing with those exceptionally large calculi which have hitherto been relegated to the cutting operation, but to such rare examples only should they be applied.

A minor but not altogether unimportant proposal of Professor Bigelow was to change the name of the operation in future from lithotrity to "litholapaxy." His procedure, however, introduces no mode of action not employed before. Bigelow's achievement has been to demonstrate that crushing a stone, even if large, and removing all the fragments from the bladder at one sitting, is a safer proceeding than dividing the work between two, three, or more sittings. The value of this principle was perceived and insisted on, as we have seen, by Heurteloup thirty years ago, but he failed for want of anæsthesia. And it is a curious fact, too, as an illustration, if one were necessary, that the principle of evacuating the stone largely, as a part of the operation of lithotrity, is in no respect a novel one, that Heurteloup himself endeavoured, at the close of his career, to change the name of the proceeding on this very ground—viz., that he not merely crushed the stone, but that he also evacuated the débris artificially as completely as possible. The term which he desired to substitute to denote his method of crushing and evacuating the bladder, was "lithocénose," from λίθος, a stone, and κένωσις, extraction. Nevertheless he signally failed to do so, although the proceeding was really then, to some extent, a new one, and the original term, lithotrity, still remained as it does to this day. For there is an equal disinclination among many surgeons, foreign and English, to admit a similar change now, it being evident to everyone who knows anything of the history of lithotrity that evacuation by artificial means has been an essential part of the procedure for at least fifty-five years, and that this part has steadily grown in importance in a direct ratio with an increasing ability and determination to crush more largely than before. Five years of experience of lithotrity completed at a single sitting enables me to testify as fully concerning its capabilities perhaps as any other operator. It has been only partially tested at present on the Continent; entertained very cautiously at Paris; but received with gradually increasing favour at Vienna, where it is now the rule; but it is not in either place accepted for the largest calculi, and a cutting operation is preferred for those hard stones which weigh one ounce and a half and upwards in size. To this fact I shall hereafter refer, in presenting an analysis of my own experience of the one-sitting operation, which I have adopted in the last two hundred cases, to use round numbers, consecutively treated by myself. I propose first briefly to describe that proceeding which has appeared to me the most desirable in order to achieve successful lithotrity at a single sitting. We will commence by examining the instruments necessary for the operation, and then consider the method of employing them best adapted to effect our purpose.

In the first place, in respect of all instruments, we must recognise the importance of not inflicting any needless injury on the urethra and bladder, and should, therefore, always select the smallest lithotrites and evacuators which possess strength and capability adequate to crush and remove the individual calculus to be dealt with. And inasmuch as the great majority of calculi are small when first found by the surgeon, undue stretching of the natural calibre of the urethra is unnecessary for their removal, since no instrument need be used which exceeds the limit of that calibre. It is only when dealing with calculi of exceptional size, that instruments which distend the urethra to a considerable degree are to be employed.

Secondly, in dealing with a calculus of any size, but especially when large, it is important to employ instruments which are simple in construction and not easily liable to be deranged in action when employed in the bladder. The presence of débris in quantity, mixed with viscid mucus, perhaps with some coagulating blood, has to be reckoned on in circumstances which demand prolonged manipulation; and mechanical arrangements which work admirably in experiment with limpid fluids outside the bladder are not unlikely to fail when brought to the test of actual service. Simplicity in the construction of instruments is, therefore, to be attained if possible.

Let me suppose that the presence of a calculus has been determined by sounding in the bladder of an elderly male. It is almost certain that the note obtained and the resistance felt in making contact generally suffice also to convey an idea, approximately accurate, regarding the size and nature of the stone. As a rule, it is not so necessary now as it formerly was to make an exact diagnosis in rela-

tion to those particulars. When it was desirable to limit the application of lithotrity to calculi of, say, one inch and a half diameter, it was important to ascertain, by some easily managed method of measuring, what were their dimensions in every case. But now that the scope of lithotrity is considerably increased, all that is requisite to be learned is, whether the stone is an exceptionally large and hard one, and whether any unnatural narrowing of the canal is present; and both these points are almost sufficiently determined by an ordinary sounding in practised hands. At all events it is unnecessary to make any further examination for the purpose of diagnosis until the patient has been placed under the influence of an anæsthetic upon the operating table, the surgeon having full liberty to exercise his judgment and act as circumstances demand.

Invariably, as soon as the patient is thus prepared for operation, I pass a full-sized conical steel-plated sound—say about No. 13 (English), in order to determine that most important point of urethral calibre before touching the stone. If the urethra is healthy, and of course in the very great majority of cases it is so, the instrument has passed with perfect ease, and may probably be followed by No. 16 or 17 in an elderly adult, by which term I mean a man of sixty years and upwards. I am sure the urethra is more capacious in such patients than in those whose age is between thirty and fifty years. In these latter the urethra often resents any active distension, and the bladder also more readily becomes inflamed than in older patients. With a urethra admitting the easy passing of No. 16 almost anything is possible, and suffices for almost any calculus; but if I am dealing with one which weighs, in my judgment, about two ounces and more, I am glad to use larger sizes, and No. 18 I have never found it necessary to exceed. But if the stone is known to be small, No. 14 amply suffices, and there can be no reason for going beyond it. This is the size which was mostly used with the original instrument of Clover in 1866, and for all ordinary purposes answers admirably.

The lithotrite is next introduced. With small and medium-sized stones, a light instrument of the half-fenestrated pattern—that is, the lower portion of the male blade penetrating the female blade, which prevents the possibility of blocking by débris, while the upper portion is flat and crushes the stone into small fragments—is, I think, the best. This mode of construction is applicable for a wide range of size in calculus, answering for any one of uric acid below about an inch and a half in length. To accomplish the first fracture of such a one, or to crush into fragments a larger calculus, a fully fenestrated lithotrite is better. There are some old forms of blade which have been in use for fifty years, which cannot, I think, be excelled; so numerous are the patterns which have been employed, that it is difficult now to imagine a new design.

To proceed, supposing that a considerable quantity of débris has been made, the calculus being large, it is advisable to withdraw the lithotrite, to introduce an evacuating-sound and attach the aspirator, so as to withdraw the débris already made before crushing more. When this is removed, the same or a lighter instrument may crush the fragments into débris, before again using the evacuator. By this time, probably, the remaining portion is not considerable, and another introduction of the lithotrite, followed by another aspiration, very likely empties the bladder. If, however, a fragment or two are heard and felt to strike the end of the evacuator, yet do not pass through it, they are probably just too large to issue, and require another crushing before the task is completed. There is certainly now no difficulty in removing any last fragment from the bladder, the more powerful aspirators emptying the cavity so efficiently that no other instrument is necessary for the purpose; while by no sound is the last fragment found so well as by the evacuating catheter, against which contact of the fragment is certain to be felt or heard, through the action of the outrushing current of water.

In regard to aspirators, the original instrument of Clover, simple in the extreme, is a very good instrument, and requires only some modification to be as efficient as most of the modern ones. For my own aspirator I have provided a tap with funnel-shaped opening to the upper part of the india-rubber ball, by which to fill it, and to remove air accidentally introduced, which offers a decided advantage. Last year I attached to the end of the evacuator in the interior of the glass receiver a light wire valve, which while it admits any fragments to enter, renders their escape impossible; its action meantime being always visible to the operator.

After the operation the patient remains in bed, and rarely requires any special management, except sometimes that which a simple traumatic cystitis demands—namely, absolute rest in bed; occasionally the urine neutralised by potash; hot hip baths; mild diet; and watchful care that chronic retention of urine does not occur, or is not permitted to continue unrelieved; avoiding on the other hand undue or unnecessary interference by means of catheters. But of all the agents for rapidly removing subacute or chronic cystitis after lithotrity, nothing equals mild injections of nitrate of silver, the effect of which is sometimes almost instantaneous. I use only half a grain of the salt in four ounces of warm water at first, gradually increasing to a solution three times that strength, beyond which it is rarely necessary to go. Usually one application a day, sometimes two, will, in the course of three or four days, remove the painful symptom and produce clear and healthy urine.

My own experience of the system of treating all calculi but the very largest, by a single sitting of lithotrity, dates from shortly before Christmas, 1878; the first example being a case which I saw with Sir Spencer Wells, who was present at the operation. Since that time I have adopted the system of completing the operation at a single sitting for every case in which lithotrity appeared to be possible, with two exceptions only, to be described immediately. The total number of adult male patients on whom I have operated during the period referred to, a term of rather more than five years, is 211. Of these, fifteen have been by lithotomy, and of course forming the largest and worst cases, with seven deaths. There remain, therefore, 196 cases treated by lithotrity. One of these was a Portuguese gentleman, No. 535, in my collection before you, to whom Mr. Clover thought it prudent to administer chloroform only for a very limited time. He had five sittings to remove a stone weighing no less than 787 grains, and made a good recovery. The other exception was that of a large oxalate of lime calculus, No. 538, which at that time I preferred to crush in four sittings. The débris weighs 640 grains; he is now perfectly well. Every one of the remaining cases, 194 in number, has been treated at a single sitting, making a total of 196 cases of lithotrity at a single sitting, with 10 deaths, or just 5 per cent. Total of 211 cases of adults by the two operations, with 17 deaths, or 8 per cent. The mean age of these patients was over sixty years. And this is a result which hitherto has, I need hardly say, not been approached by any other mode of treating calculus in the adult. This subject, however, will be illustrated more fully in the succeeding lecture, when I shall present the results of my entire series, embracing upwards of 800 cases by the two operations.

I have crushed several stones of uric acid, and one of oxalate of lime, considerably upwards of an ounce in weight. The largest uric acid calculus I removed at a single sitting weighed two ounces and three-quarters, and occupied me seventy minutes. The patient was seventy years of age, and made a capital recovery. I cannot speak too highly of the results thus attained. Indeed, nothing need be added to the figures I have adduced above, which exceeded any expectation I could have previously formed as to the success of operating on men upwards of sixty years of age, with stones of all sizes. In conclusion, I think we must admit that the operation of lithotrity at a single sitting bids fair to supersede lithotomy for the adult calculous patient in all cases except those in which the stone is of rare and exceptional size.

ON CHARCOT'S JOINT DISEASE.

BY W. HALE WHITE, M.D., M.R.C.P.,
SENIOR DEMONSTRATOR OF ANATOMY AT GUY'S HOSPITAL.

DURING the last few months the subject of Charcot's joint disease in association with locomotor ataxy has come before the Pathological and Clinical Societies three times, and on each occasion observers of great note have been found to state their scepticism as to the existence of any definite arthropathy such as Charcot describes. Thus, when Mr. Arbuthnot Lane brought his paper on Mollities Ossium, Rheumatoid Arthritis, and Charcot's Disease before the Pathological Society,[1] both Mr. Hulke and Dr. Goodhart seemed to consider that all the cases which had from time to

[1] THE LANCET, Jan. 19th, 1884, p. 106.

time been shown them as examples of Charcot's disease were really rheumatoid arthritis; and when Mr. Clement Lucas read his paper before the Clinical Society,[2] Dr. Moxon stated his belief that Charcot's joint disease was only rheumatic arthritis occurring in patients affected with locomotor ataxy. If no others than the three gentlemen just mentioned were doubtful of the entity of the disease, the fact of their hesitation to accept it would make it worth while to inquire into the exact position of the question as to whether or not it is a distinct malady. It seems to me that three views may be held with regard to it. In the first place, there is that of Charcot and his followers, who state that the joint disease is a distinct specific arthropathy peculiar to locomotor ataxy. Secondly, there is the view that it is an ordinary arthritis, somewhat modified by the conditions of the patient, but dependent upon nerve lesion, as are the arthropathies found after injuries to nerves. Thirdly, there is the view that it is merely a rheumatic or some other form of arthritis which has occurred in an ataxic patient, the coincidence of their occurrence being pure chance.

To take Charcot's view first. We are here dependent entirely upon the clinical and post-mortem characteristics, because up to the present time no one has been able to state in what part of the nervous system the joint centre, if there be such a spot, exists. Charcot was at first inclined to place it in the anterior cornua, but this theory has been abandoned because post-mortem experience has shown that the disease may be present without any change in the anterior cornua being demonstrable. Then the hypothesis has been put forward by Buzzard that there is in the medulla an arthritic centre which becomes affected in locomotor ataxy. He urges in favour of this view the frequent association of gastric crises with joint trouble; but although this is an ingenious hypothesis, it is as yet hardly certain enough to allow us to argue that because there is a joint centre in the medulla, therefore we may look for joint lesions of a specific nature in locomotor ataxy. It has also been urged that the lesions of the peripheral nerves discovered by Pitres and Vaillard are the cause of the arthritis; but against this is the fact that in some cases in which the joint trouble has been present there has been no peripheral nerve change. Thus we see, as we are unable to argue *a priori* from the fact of a nervous cause for the joint troubles in locomotor ataxy being constantly present that therefore they are probably peculiar to that malady, the view we are now considering depends entirely upon the clinical and post-mortem characteristics of the disease. The clinical symptoms are, according to Charcot,[3] briefly these:—Without appreciable external cause in the slightly advanced period of the locomotor ataxy this arthropathy is developed; the first phenomenon discernible is extreme tumefaction, which is formed by a considerable hydarthrosis, and an engorgement presenting a hard consistence; usually there is no fever, pain, or cracking sound. At the end of some months the swelling disappears and all returns to the normal state, or in other cases serious disorder, such as crackings, dislocations, &c., remain in the joints; the order of frequency is knee, shoulder, elbow, hip, wrist. At the meetings of the Pathological and Clinical Societies just referred to neither Mr. Hulke, Dr. Moxon, nor Dr. Goodhart—all distinguished clinicists with a large field of observation—knew anything of this train of symptoms. In thirty cases of locomotor ataxy which he had most carefully observed, Dr. Moxon had not detected any specific arthritic changes. Charcot, however, found five patients presenting such changes among fifty examined. The following quotation from Senator[4] will, I think, show that he is not certain that the arthropathy of locomotor ataxy is a distinct disease:—"Charcot and his pupils subsequently drew attention to the occurrence of peculiar articular swellings in locomotor ataxy and other forms of paralysis ..... It is quite true these articular swellings did not invariably present the characters of arthritis deformans; they often set in with abundant effusion into the joint, a symptom quite foreign to the latter disease; in other cases, however, the characteristic morbid changes developed themselves either at once or after a time." Further on he says: "To distinguish arthritis deformans at this early stage from the articular neuroses there are hardly any criteria." Ball[5] is very emphatic in pointing out the distinctions between the two maladies, but the impression one gets from reading his article is that there are many similarities. Thus he records two cases in which are presented heat and redness of the joint, and other connecting links might be found in his descriptions.

We have heard a good deal about the frequency with which these cases have been overlooked by surgeons, and there is the story told of a patient who, although suffering from Charcot's joint disease, was shown to the candidates at one of the examining boards as a case of rheumatoid arthritis; but surely all this tells strongly in favour of the view that there are no distinct clinical characteristics of Charcot's disease, for those surgeons who are accused of having made such errors, seeing, as they do, a large number of cases of rheumatoid arthritis, would have been the first to set aside these cases as peculiar had they really been so. The case that was used for examination purposes cannot have been so very out of the common if it passed through several surgeons' hands as a case sufficiently typical to show to candidates.

Turning again to Charcot's own account of the disease, we find that he admits "the analogy existing as regards cracking sounds, the osseous tumefactions, &c." It is perhaps difficult to determine exactly how much is included under that "&c.," for a reference to his list of points of distinction between the two diseases will show that there is hardly a single symptom which is not in some measure common to his disease and an ordinary arthritis; thus pain, thickening of the synovial membrane, and hydarthrosis may be present in both. I have seen lately six cases of joint disease in locomotor ataxy, all of which were considered to be examples of Charcot's disease by some of those who had seen them, although not one of them was universally allowed to be an example of that malady; but I have never seen a case of joint disease in association with locomotor ataxy which was universally allowed not to be Charcot's disease. This is, of course, not logically conclusive, but still it is some evidence that whenever a patient is discovered with locomotor ataxy and a joint lesion somebody will be found who thinks it is a peculiar arthropathy. Although one or even two of the six cases above-mentioned were not typical instances of ordinary arthritis, there was not a single one that I should like to say could not be regarded as some form of that disease.

When we come to consider the pathological aspect of the joint lesion, it is evident at once that the peculiarities of Charcot's disease are not very striking; in fact, he himself says, "On the whole, anatomically speaking, our arthropathy is included in the group of dry arthritis," and certainly this is true of the specimen he presented to St. Thomas's Hospital Museum. I do not think that anybody on being shown that would say, without knowing the history of the case, that there was anything about the bone to distinguish it from a specimen of rheumatoid arthritis. The piece of the top of the humerus he presented to the Museum of the College of Surgeons (No. 1921), shows that the head of the bone has entirely disappeared. A smooth and partly eburnated surface is left, surrounded by bony outgrowths. It will be noted that these last two points are most characteristic of rheumatoid arthritis. This specimen is in a case with many other dried ones of joint mischief, and thus there is an excellent opportunity of noting the points in which it resembles them. The only other example I am acquainted with is the pelvis, which I exhibited to the Pathological Society, and which Prof. Charcot was kind enough to examine for me. He pronounced it to be a rare form of the arthropathy he associates with locomotor ataxy. Now, this specimen undoubtedly presents a very unusual condition of things; the slight formation of new bone, the rarefaction of the normal bone, and the great deepening of the acetabula as a result of this, and the pressure inwards of the heads of the femora, go to build up a pelvis quite unlike anything which any Englishman to whom I have shown the specimen has seen. It was taken from a dissecting-room female subject; there is therefore a strong probability that it came from some infirmary bedridden subject. One thing is quite certain—namely, that she was in some public institution with a resident medical officer. Now, surely, considering how everyone is on the alert to find a case of Charcot's joint disease, had this patient presented symptoms of locomotor ataxy, she would have been recorded in one of the journals, or we should have heard of it in some way or another. It should also be noticed that there was some slight evidence of formation of new bone, although the chief characteristics were undoubtedly the absence of stalactites and the predominance of the wearing away process; but

[2] Ibid., March 1st, 1884, p. 414.
[3] Disease of the Nervous System, Second Series, Sydenham Society's Transactions, p. 54.
[4] Ziemssen's Cyclopædia, English Trans., vol. xvi., pp. 152 and 160.
[5] Gazette des Hôpitaux, 1869, p. 234.

considering that we have no evidence of locomotor ataxy, that both hips (which in Charcot's disease are but rarely affected) were here diseased, that there is some evidence of new bone formation, that the bones in old people are very liable to become light and thin, and, lastly, that in old people morbus coxæ senilis, which assumes divers forms, is common, is it not perhaps better to postpone definitely calling this specimen one of locomotor arthropathy, as our knowledge of this disease is still in its infancy?

Specimens 1922 and 1922A in the Royal College of Surgeons Museum show how extremely difficult it is to be sure of any distinct characters in the joints said to be affected with Charcot's disease. No. 1922 consists of the bones of the right upper extremity; they are all very wasted and much thinned, the shoulder-joint is destroyed, the head of the humerus gone, and the wrist bones are much atrophied, but the bones are no smaller than I have seen in an upper extremity which has been spastically contracted and disused for some years. The left knee-joint shows no production of stalactites, but the bones are so thinned that the first thing that suggested itself was that, whatever disease the patient suffered from, she must have been unable to use her leg for some time. In the catalogue is the following: "Joint changes symmetrical; those most like locomotor ataxy occur in the shoulders." The writer then goes on to say that the joint changes present "just the features of Charcot's joint disease. It may be that the woman is ataxic, and in a poor bedridden cripple it is not easy to decide this point; if, however, it be thought probable that ataxia is present, the case still remains chiefly one of general rheumatism, for the joints are or have been almost all affected, and with remarkable symmetry, whilst none are positively dislocated." Surely if a case presents just the features of Charcot's joint disease but still remains chiefly one of general rheumatism, there cannot be much distinction between the two diseases.

One need not proceed in showing that it is doubtful whether this disease is a pathological entity, because Charcot himself allows that it is not, the only points he urges are that in it the productions of new bone are slight, whilst the wearing away is excessive. I have tried to show that these two points in the three specimens I have seen are not so characteristic as to be very distinctive, and I hope to show that they may be accounted for in a simple way. I would refer the reader who is interested in the subject to the descriptions[6] by Féré, and Charcot and Féré, of the specimens in Paris. Here the majority of the cases undoubtedly show the two points just mentioned; nevertheless, there are some which are not much worn away and some with new stalactites. Mr. Arbuthnot Lane has already shown in the paper referred to that in a patient with most of the joints affected with rheumatoid arthritis the jaw may present such characters as to make it indistinguishable from Charcot's arthropathy. This speaks for itself.

Let us consider next the hypothesis that this arthritis occurring with locomotor ataxy is really the same as is produced in joints after injuries to nerves. Weir Mitchell[7] says it is quite evident that injuries of the spine, diseases of the spinal cord and of the brain, and wounds or any form of lesions of nerves, are capable of developing in the joints inflammatory conditions, usually subacute, and which precisely resemble rheumatic arthritis in their symptoms and results, so that no clinical skill can discriminate between the two. The same author again[8] says that the arthropathies due to nervous disease are so difficult to tell from rheumatism that they lend support to the theory that it is primarily a nervous disease. J. K. Mitchell, nearly fifty years ago, in the *American Journal of Medical Science*, also pointed out that obvious spinal cause may produce rheumatism characterised by heat, pain, redness, and tumefaction. It has also been shown by Gull that diseases of the cord will produce joint mischief. Ziemssen allows that injuries of the nervous system may be the cause of joint lesions. Charcot[9] himself gives several cases, such as one of a tumour of the right hemisphere, in which the joints of the opposite side were affected; he also shows that this cannot be due to a descending lesion, because it comes on too early, and for the same reason it cannot be due to functional inertia. Thus it appears there is no doubt that nerve lesions will produce joint disease indistinguishable from other well-known forms of arthritis. All authors who have written upon these arthropathies are of opinion that they are produced by inhibition of the trophic influence of certain nerves. There are perhaps some who still do not recognise the existence of trophic nerves, but at present the evidence is in support of their existence. Foster, who is always very cautious, considers that facts turn the balance in favour of trophic nerves. We must therefore allow the possibility of joint changes due to nervous lesion in a malady presenting such widespread alterations in the nervous system as does locomotor ataxy, but it is difficult to see the advantage of surrounding them with a halo of mystery; they may not be perhaps so acute as some nervous arthropathies, but still if they are due to a nervous change they must belong to that class, and t can only result in confusion to separate them from it. They must also be inflammatory; it is always allowed that the destruction of trophic influence results in inflammation of a part; true it is that it may be modified by various circumstances. Thus in the case of a joint inflammation not much new bone may be thrown out, but still it will belong to the same group. There can, it seems to me, be little doubt that not nearly all the cases that are described as Charcot's disease are really examples of an affection of the joints due to the destruction of some nervous influence; nevertheless, as I have just stated, we must allow that such is possible, although the admission lands us in considerable difficulties. Thus, if we allow that there is a trophic centre somewhere in the central nervous system which presides over the joints, some affection ought to supervene in them whenever the path from the centre to them is interrupted; for example, if the centre be in the medulla, as Buzzard supposes, whenever the nervous tract going from the medulla to the knee is injured we ought to get changes in the knee-joint, but we do not. The subjects of fractured spines may live for months without joint changes; severance of the cords in animals leads to no such result. Undoubtedly sometimes destruction of the cord will lead to joint mischief; but if the theory be true, it ought always to do so; just as section of the vagus always makes the heart go faster. The only way out of the difficulty is to imagine that the trophic influences descend in the sympathetic cord; this may be so, but at present we have no evidence of it.

The last of the three possible views is that the cases under consideration are ordinary rheumatic or other forms of arthritis occurring in ataxic patients, independently of their nervous disease, although sometimes modified by the conditions enforced by it. This view will, I imagine, be found to satisfactorily explain a very large number of cases called Charcot's joint disease, whilst for the remainder we may invoke the aid of the theory which refers them to some tropic nerve lesion. We are in fact driven to it by exclusion, and it is supported by the numerous resemblances to chronic rheumatic arthritis which have already been shown to exist in many cases of so-called Charcot's joint disease. When it comes on late in the ataxic it may be, as Volkmann has suggested, a traumatic arthritis, for this condition must be prone to occur in patients always flinging their legs about, and, once set up, it is very unlikely to have much chance of getting well. In the bedridden cases there are all the conditions requisite for the production of this arthropathy. It is well known that joints but little subject to use are very liable to disease. Thus I know of a gentleman who was confined to his bed for some weeks on account of a severe strain of the hip. He first got up for a short time one evening, and on waking the next morning his knee-joint presented exactly the characters ascribed to Charcot's locomotor arthropathy, but this change was obviously merely due to the slight use to which he had put a joint which had been for a long time disused. Then, again, with regard to the thinning of bones and fractures. One has only to spend a week in a large dissecting-room to see that old bedridden people are peculiarly liable to have their bones very thin, and hence also very liable to fracture of them. The supporters of the view of the specific entity of the locomotor arthropathy admit that it is very rare; thus, Charcot himself puts it at one in every ten cases of ataxy, and this is a high proportion. We have just shown that the examples which occur late in the malady may be easily explained, without necessarily supposing them to be peculiar to ataxy; so that we have only those few left which come on in the early period of the disease, and when we remember that in these cases sometimes the joint may be red, sometimes there may be fever, sometimes there may be much pain, and sometimes effusion into the joint, it does seem, considering

[6] Archives de Neurologie, Nos. 10, 11, and 18.
[7] Injuries to Nerves, p. 170.
[8] Spinal Arthropathies, Amer. Journal Med. Sciences, 1875, p. 339.
[9] Arch. de Physiologie, 1868, p. 172.

the avowedly few number of cases and the numerous connecting links, somewhat rash to maintain that these are examples of an arthritis peculiar to locomotor ataxy. Then, again, in order to prove the case for a peculiar arthropathy, it must be shown that ataxics are more liable to joint trouble than other people, for unless they are less liable to rheumatic arthritis and common joint diseases than the rest of mankind, they will have these troubles together with their special ones, so that a larger percentage of ataxics than of ordinary people will have joint disease. But this has never been shown to be so, and my impression is that ataxics would not be found to be more liable to joint disease than any other class of people. But we are told post mortem the difference is to be seen, inasmuch as the wearing away process predominates over the production of stalacutes. The conditions under which ataxics are placed will, it seems to me, account for this, which, as shown above, is not always very marked; their whole vital power is lowered by the restraint imposed upon them by their malady. Thus they are often confined to bed, and various depressing complications are liable to supervene. Is it, then, strange that the new bone should not be thrown out very abundantly? The excessive wearing away can easily be accounted for when we remember the extreme thinness of the bones. If we look to other diseases, we see how the general condition of the patient modifies their course; for example, if a patient be in a very low condition, the granulations on an ulcerating surface will be small and grow slowly, whilst if he be in robust health they will be abundant and grow quickly. If in this case, why in that of the joint mischief may not the condition of the patient be used to explain a seeming peculiarity?

Further observation may show that Charcot's disease is a condition specially associated with locomotor ataxy. My object has merely been to point out that this has not been yet completely proved, and to present the arguments against it; also to suggest that whilst some cases of Charcot's disease may, like other nervous arthropathies, be due to the alteration of some trophic influence, a large number of cases that have been brought forward as a special disease are ordinary and well-known forms of arthritis, possibly somewhat modified by the condition of the patient.

St. Thomas's-street, S.E.

CHARCOT'S JOINT DISEASE

(ATAXIC ARTHROPATHY; TABETIC ARTHRITIS).

BY PHILIP H. KIDD, M.B. EDIN.,

ASSISTANT-SURGEON TO THE HARTLEPOOLS FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.

THE comparative rarity of this disease, its recent discovery, and the obscurity that still hangs over many points alike in its pathology and its clinical picture, justify, I think, the somewhat detailed description I have given of the following case:—

Mr. ——, between forty-two and forty-three years of age, a small shopkeeper, began about a year and a half ago to complain of pains in his thighs and the lower part of his abdomen, which he compares to being slit with a knife, and for the relief of which he used to curl up his left leg, so that his heel touched the trunk on the same side, and take long walks. Shortly afterwards he noticed a crackling sound in his left thigh whenever he moved it, and this was succeeded by swelling over the region of the hip-joint, which seems to have reached as far as half-way down the thigh on the outside, and was accompanied by a more circumscribed swelling in front of the joint, thus showing, I take it, that it was a true effusion into the cavity of the articulation. He then called in the medical officers of the Association, who prescribed for him, and painted his hip with iodine. Treatment was followed by subsidence of the swelling, but the crackling sound remained, and the pains descended into his leg, and about that time he also noticed wasting of the leg. He was able soon afterwards to get about by means of a stick, and attendance on him ceased for some months. On March 8th last, he first noticed the crackling in the right hip, unaccompanied this time by any swelling, and as this increased, and the corresponding leg and thigh began also to waste, he asked for further attendance.

On April 4th I saw the patient, and elicited the following facts. He has always lived a steady, quiet life, and has a comfortable home; has had no form of venereal disease, nor suffered from nocturnal emissions; has always been a healthy, active man, and the only point in his history is that about seven years ago he was knocked down by a frightened cow in the street, and was brought home looking, his wife says, "just like a corpse." She avers that he has never been the same man since. He has been married fifteen years and had nine children, of whom five are alive and all healthy. He has never indulged in spirituous liquors, though his father is a heavy drinker. His family history is good.

The patient when I saw him was a good deal emaciated, had an anxious expression, and a dusky, unhealthy complexion. There was no evidence of any pulmonary or cardiac disease. On moving either hip loud crackling sounds were produced, which were propagated down the thigh. He complained of pains like being slit with a knife down the legs and in the lower part of the abdomen; sometimes these pains passed up into the epigastric region, and then he lost his appetite for a day, but there was never any vomiting or other gastric disturbance of any kind. There was no girdle pain. The patellar tendon-reflex was entirely absent in both limbs; in sitting on the bedside to have this tested his right foot swung at a normal angle to the leg, while in the left limb the dorsum of the foot and of the leg were in the same straight line, and the great toe curved downwards to the ground; the cutaneous veins were noticed to be engorged in both lower extremities, especially so in the left. Tactile sensation was fairly correct in both soles, though it was delayed; but there was well-marked analgesia except in one spot in the waist of the foot. The character of the gait was too much masked by the double hip-joint disease to be trustworthy; but he did not seem to have the usual feeling of padding in the soles of his feet; he had never noticed any difficulty about walking in the dark, but soon began to totter when standing with his eyes shut. The glutei muscles were not atrophied, and when standing they were in a condition of spasm, which was probably due to the great laxity of the ligaments. He had now no skin disease, but last summer while under treatment he said he had an eruption on his chest, which seemed to have been a diffused redness not marked by wheals, vesicles, or papules, and which came and went. When it was fully out it was accompanied by intense itching and burning, but did not seem to have had any relation to, or connexion with, the slitting pains. The gastric, intestinal, and laryngeal functions were normal. For three weeks previously his urine had passed away from him while sitting or lying down; the first thing he knew about it was the wetness of his shirt. The vision of his right eye was about normal, but with his left he could not make out No. 20 Snellen's types at any distance. The pupils were both a good deal contracted, but retained a feeble amount of accommodation to both light and convergence. They responded less readily to light than to convergence, so that the Argyll-Robertson phenomenon might be said to have been partially developed. With the ophthalmoscope the fundus of the right eye appeared to be normal; the fundus of the left was pale, the vessels were small and tortuous, and the optic disc was atrophied.

There could, I think, be no doubt that this was a true case of locomotor ataxia, and of the joint disease which sometimes accompanies it. The salient points seemed to me to be the particular joints affected; the appearance of the grating prior to any effusion; the great laxity of the ligaments in the ataxic limbs and the early date in the history at which this would seem to have existed; the absence of *crises gastriques;* the position of the left foot when pendulous, as somewhat complicating the diagnosis; and the differential diagnosis from chronic osteo-arthritis in such a case as this where the locomotor ataxia was not previously known to exist. As regards the question of diagnosis, Dr. Byrom Bramwell[1] gives three criteria—(1) that this disease is more acute; (2) that in chronic rheumatic arthritis the smaller joints and the hip are most frequently affected, whereas in locomotor ataxia the knee and shoulder are most often involved; (3) the presence of liquid effusion and dislocations. I have not found any of these criteria of very much help, for my case has lasted very nearly a year, probably quite, and, beyond the fact of another joint having become involved, not much progress seems to have been made. As to the joints affected, besides this one, I have access to the records of only eight cases. In the case shown by Mr. Page to the Medical

[1] Diseases of the Spinal Cord, p. 231.

Congress of London[2] the tarso-metatarsal joints were the seat; in both Mr. Macnamara's two cases,[3] shown at the same time, the right hip was affected; at the same time Professor Charcot demonstrated two cases; in Berthelot the left knee was first attacked, though the right hip eventually did not escape; in Cressy there was disease of both hips. Dr. Hale White's[4] post-mortem case was of both hips; Mr. Lucas's case[5] showed the right elbow and foot affected; in Mr. Raven's[6] the knee-joints were the first attacked. With such a record Dr. Bramwell's view can scarcely be accepted; indeed it would seem that the hip is rather a favourite seat of the disease. In both Mr. Macnamara's cases, as in mine, the effusion was but a fugitive phenomenon, and dislocations are not always seen apparently till a later period. The most trustworthy criteria seem to me to be the absence of pain in the joint itself, which must be carefully distinguished from the lightning pain in the limb, which may easily be mistaken for rheumatic; the laxity of the ligaments; and any evidence of disease of the nervous system. A careful inquiry will then probably set the matter at rest by showing the existence of ataxia.

With reference to the true nature of the disease and its etiology, I would for the present be content to look on it as depending on want of nutrition, and referable to the same predisposing causes, at least, as the laxity of the ligaments and as the perforating ulcers occasionally seen in ataxic limbs. The cause of this want of nutrition I am inclined to agree with Dr. Althaus in ascribing to peripheral neuritis; Dr. Charcot's theory of affection of the anterior cornua would seem to be upset by more recent cases, and for Dr. Buzzard's bulbar theory, I know of no evidence; besides, a spinal lesion does not seem to be a necessary factor of locomotor ataxia itself.[7] As to whether the disease is a true atrophy or a low and modified form of inflammation, I must leave to pathologists to discuss; my point of view is from the bedside, not the post-mortem room.

I cannot conclude this report without thanking my late senior colleague, Dr. Johnstone Weir, both for giving the case over to me to study directly he knew my diagnosis, and also for kindly furnishing me with the report on the eyes; his experience gained while resident at the Glasgow Eye Infirmary renders his report accurate and trustworthy.

West Hartlepool.

ON CYSTS AND CYSTIC TUMOURS OF THE BREAST.

By HENRY T. BUTLIN, F.R.C.S.,
ASSISTANT-SURGEON AND DEMONSTRATOR OF DISEASES OF THE LARYNX, ST. BARTHOLOMEW'S HOSPITAL.

No. III.—Cystic Tumours.

THE two preceding papers have been devoted to the consideration of those diseases of the breast in which the formation of cysts played the chief or, in some instances, the only part, and in which there was no real tumour external to the cyst, although some of them, the glandular cysts especially, contained intra-cystic growths. In this, the last paper of the series, I propose to speak of the tumours which contain cysts, and particularly of those tumours to which the name of sero-cystic has been given.

I have recently described in the System of Surgery and in the fourth volume of the American Encyclopædia of Surgery the general relations between cysts and solid tumours, and I need only point out now that cysts may form in tumours of the breast just as they form in the natural tissues of the breast; they may be glandular or connective tissue (lymphatic). They are far more common in the connective tissue tumours, fibromas, and sarcomas than in the carcinomas; and, contrary to what might be expected, cysts of glandular origin are far more common than those of connective tissue origin. When, however, the frequency, nay, the almost invariable occurrence, of glandular structures in the connective tissue tumours is remembered, this fact will not appear so singular. The manner of the formation of the glandular cysts in the connective tissue tumours is precisely similar to the manner of their formation in the normal breast. Fluid is secreted into the interior of the acini and small ducts which form so striking a part of the structure of the tumours. The fluid cannot escape because there is no apparatus provided for its escape, the ducts which connect the secreting structures of the tumour with the main ducts of the gland, if they still exist, are obstructed, and consequently worthless; the fluid, therefore, must either be absorbed or must distend the cavities into which it has been poured. When a connective tissue tumour, of whatever kind, contains cysts, the cysts are much more prone to become the seat of intra-cystic growths than are the cysts which develop in the normal breast; for, in addition to the growths which spring from the wall of the cysts into their interior, the tumour, constantly increasing, tends to increase in the directions of least resistance, and thrusts its new growths into the cavities of the cysts, pushing the wall before them, distorting the shape of the cysts, and leading by pressure to absorption of part or of the whole of the fluid. In many such tumours there is thus a continual struggle for place between the solid and fluid constituents. The glandular apparatus pours out fluid, the fluid widens a cavity for itself, the solid puts forth new solid, the new solid is projected into the interior of the cavity, and the cavity is often scarcely formed before it is filled up and obliterated by solid growths. In the carcinomas the manner of development of cysts is probably not always that which has been described. The impulse to the development of new cells in the interior of the glandular acini and ducts is so strong that it is more than probable that new cell formation precedes the development of cysts, and that the cysts are, in many instances, due to the degeneration of the central cells of a cell mass (in the manner described by Mr. Eve).

I have in my possession notes of sixty-six cases of cystic tumour of the breast, many of which were examined by myself, and all of which were examined microscopically. In all these cases the cysts were of more or less considerable size, so as to form a striking feature of the disease. Fifty-six were connective tissue tumours, nine were carcinomas. One was an adenoma. The connective tissue tumours were thus divided: twenty-five sarcomas, eighteen fibromas, six adeno-fibromas, seven mixed connective tissue tumours. For all practical purposes the fibromas and adeno-fibromas may be included under one heading, for there is almost never a fibroma which does not contain glandular structures, and the rather larger proportion of glandular structures which the adeno-fibromas contain does not in any respect affect the course which they pursue. The mixed connective tissue tumours were composed of fibrous, mucous, and sarcomatous tissues in varying proportions, so that some of them might be regarded as fibrifying sarcomas; others as fibromas which had not completed their development. They invariably contained glandular structures, sometimes in considerable quantity. Anatomically, it appears from these sixty-six cases that almost every kind of tumour which attacks the breast may be cystic, and that there is not any one variety of tumour which especially deserves the name of cystic. Nor, on the other hand, are there any of these tumours which occur in the breast only in association with cysts—in other words, only in a cystic form. Clinically, the facts in my possession are defective, for few of the cases have been followed long after operation. Still, the facts which have been observed all tend so show that the life history of these tumours is dependent on the nature of their solid constituents, not on the size or number of the cysts which they contain. Thus, the further history of seven cases of sarcoma is recorded. In four of these very considerable operations were practised, the entire breast having been removed freely at the first operation; no recurrence took place in any of them, although one of the patients died between two and three years later of cancer of the other breast. In the other three cases recurrence took place in two of them after removal of the tumour; in the third after amputation of the breast. The last was evidently a very bad case; the tumour had only been noticed a few months, it had grown quickly, and the recurrence took place almost before the wound of the operation was healed; no further attempt to remove it appears to have been made. The recurrences in the first and second cases were numerous, continuing till one patient died from the effects of the fourth operation, and until the last report in the other case, full fourteen years after the first tumour was removed. It is interesting to note in confirmation of Dr. Gross's statement that sarcomas of the breast do not affect the lymphatic glands, that the only instance in which there was enlarge-

[2] Transactions, vol. i. p. 124. [3] Ibid., pp. 125, 123.
[4] THE LANCET, Nov. 24th, 1883. [5] Ibid., March 1st, 1884.
[6] British Medical Journal, Feb. 23rd, 1884.
[7] THE LANCET, Nov. 3rd, 1883.

ment of the axillary glands in connexion with a cystic sarcoma was one of these seven; the glands were not removed, and when the patient was seen four years later the enlargement had subsided completely. Of the twenty-four cases made up by grouping together the fibromas and adeno-fibromas the further history of six is recorded. In five of these there was no recurrence, whether the operation had been merely a removal of the tumour or amputation of the breast. In the sixth a second tumour appeared near the site of that which had been removed about six months previously, grew for a few months, then ceased to enlarge. It does not appear to have caused any trouble, and was therefore not removed. Three of the patients with mixed connective tissue tumours were heard of long after they had been operated on. The results of the operations were, as might have been expected, somewhat different. In two of them there had been no recurrence; in the third the breast had been removed completely by a second operation, and when the patient wrote in reply to an inquiry from myself she was again suffering from recurrence. Where the tumours are of so mixed a structure, containing various modifications of fibrous and mucous tissue and a larger or less amount of embryonic tissue, it is absolutely impossible to offer a certain prognosis. The cystic carcinomas presented no other unusual characters except the cysts; their course was precisely similar in all respects to that of an equal number of carcinomas without cysts.

From a study of the various cystic tumours of the breast I cannot but come to the conclusion that the cysts, although they produce a marked alteration in the physical characters and are associated with rapid growth of the tumours, are of absolutely no importance so far as the life-history of the tumours is concerned. The cysts, however large and numerous they be, neither diminish nor increase the capacity of the tumour for evil. A cystic fibroma is not more formidable to life, except in so far as it is generally larger, than is a fibroma without cysts; a cystic carcinoma or sarcoma is not less likely to recur than is a carcinoma or sarcoma without cysts. The cysts may almost be regarded as an accident in the development of a tumour of the breast, and, seeing that almost every variety of tumour of the breast may contain them, it might further seem that any and every tumour of the breast might, at any period of its development, become cystic. Such, however, is not the case; the same rule with regard to age prevails for cystic tumours as for simple (glandular and connective tissue) cysts; they are a disease of women over forty years of age. Only two of the sixty-six patients of whom I have spoken were under thirty years, and in both these cases the cysts were what are termed soap-cysts, a modification of milk-cysts, and therefore essentially cysts of the breasts of young women. Fifty-six patients were over forty years of age, and of the remaining eight who were between thirty and forty years, four were between thirty-seven and forty years. The relation of cystic tumours to age is much more difficult to explain than was the relation of simple cysts to age.[1] Fibromas, adeno-fibromas, and sarcomas occur in the breasts of women of all ages, and the fibromas containing glandular structures are more common in the breasts of women under than over forty. Nay more, tiny cysts are common in these fibromas or adeno-fibromas of young women. I have several examples of tumours containing such tiny cysts, some of them scarcely visible to the naked eye, yet most of them containing intra-cystic growths. Microscopically, neither the cysts nor the intra-cystic growths differed from the cysts and intra-cystic growths in the larger and decidedly cystic tumours. Surely it is a marvellous circumstance that only women of a certain age appear to be capable of developing those large and numerous cysts which make so striking a part of many tumours of the breast.

The foregoing remarks are entirely opposed to the teaching of the principal text-books of surgery at present employed in our schools, in which the classification and description of most of the tumours of the breast are those used fifty or more years ago. The books have been compelled to adopt largely the anatomical classification of tumours in the chapters which are devoted to the general account of these diseases; but they have not yet carried this classification into the chapter devoted to tumours of the breast. This is much to be deplored: first, because the student is perplexed by being obliged to apply a quite different classification to tumours of the breast to that which he has used elsewhere; second, because the descriptions of the tumours and the very terms which are applied to them draw his attention from the most important features of the diseases and fix it on those characters which are indeed most striking but are comparatively unimportant. As a teacher of surgery in a large school I constantly feel this difficulty in regard to tumours of the breast. I would fain teach as I believe and make my teaching harmonise with that of the best modern works on pathology of the last twenty years; but the fear lest such teaching should clash with the opinions of the examining boards has hitherto prevented me from doing so.

Queen Anne-street, W.

[1] Vide THE LANCET, vol. i., p. 749.

ON

THE DIAGNOSTIC VALUE OF WESTPHAL'S SYMPTOM IN SOME UNUSUAL FORMS OF SPINAL DISEASE.

BY JULIUS ALTHAUS, M.D., M.R.C.P.,
SENIOR PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S-PARK.

LOSS of the knee-jerk is found in all cases of uncomplicated tabes in which we have to do with sclerosis of the posterior columns in the lumbar portion of the cord; and this symptom is of the greatest diagnostic value, more especially in those by no means unfrequent cases where the other symptoms of spinal disease are somewhat indistinct, and it may be overshadowed by signs which are apt to be referred to stomach and liver derangement, or are believed to be owing to gout, hypochondriasis, and other diseases. In the following case the diagnosis of gout had been made by several experienced practitioners, and it was chiefly the presence of Westphal's symptom which enabled me to recognise the existence of tabes.

A stockbroker, aged fifty-nine, married, but childless, consulted me in October, 1881. He complained of being eaten up with the gout, and of having the most fearful gouty pains in his head, chest, back, loins, stomach, and, worst of all, in the bladder. He had had syphilis fifteen years ago, but had not shown any symptoms of it during the last twelve years. He had lately been treated with citrate of potash, lithia, and colchicum, but without relief. The peculiar description which he gave of the pains to which he was the subject made me suspect tabes; and on examining his legs, I found the knee-jerk absent, which threw at once a flood of light on the nature of his malady. I then examined him for other symptoms of tabes, and found that he had Argyll-Robertson's symptom of reflectory rigidity of the pupils, staggered on standing with his eyes closed, had lost the sexual power some years ago, and suffered frequently from incontinence of the bladder and bowels. He had regular *vesical crises* from time to time, when he would be seized with severe pain in the bladder, chiefly at night, and constant desire to pass urine. On some occasions he had been called out of bed more than sixty times in the course of a single night, and would each time pass only a few drops of urine, in great agony. He had similar *rectal crises*, and would soil himself five or six times in the course of a night. The upper extremities were not affected, with the exception of an area of numbness in the right ulnar nerve.

In July, 1882, Dr. Philpot, of Croydon, asked me to see a patient with him, whose case had been diagnosed as "hypochondriasis with loss of nerve power" by several physicians; and although I was led to look for tabes by a different symptom, yet loss of the knee-jerk alone enabled me to speak with certainty as to the nature of the disease. The patient was fifty-six years of age, married, and father of two children, and had been actively engaged in business; his chief complaint was of great depression of spirits, indigestion, and tightness round the chest, which he had had for about two years. A feeling of constriction of the chest being a common symptom of tabes, I examined the patellar tendon-reflexes, and, finding them completely absent, had no difficulty in eliciting the history and presence of numerous other symptoms of that disease. It appeared that the patient had had syphilis ten years ago. Eight years afterwards he began to complain of numbness in the third and fourth fingers of both hands, of dull pain in the back and legs, of incontinence

of urine, constipation of the bowels, and loss of sexual desire and power. In addition to these symptoms, there was now reflectory rigidity of the pupil's, Romberg's sign, difficulty in going downstairs, a sensation as if there were a pad of india-rubber under the soles of the feet, and slight ataxy in walking.

In December, 1881, I was consulted by an officer, aged thirty-seven, who had served fourteen years in India, and had suffered there during the whole of that time, more or less, from congestion of the liver and diarrhœa. He contracted syphilis in 1872, and had afterwards specific eruptions, chiefly on the legs, sore-throat, and persistent soreness of the tongue. His chief complaint, however, was of sleeplessness, which had come on sixteen months ago, and proved most obstinate, as it resisted all the remedies usually given for that condition. A feeling of general prostration, which he had had since that time, was by the patient attributed to the loss of sleep. Another symptom he mentioned was a feeling of "fierce compression" round the chest, and this led me particularly to examine the patellar reflexes. Finding them lost, I looked for other symptoms of tabes, and found great flabbiness and emaciation of the muscles of the legs, motor debility, numbness in all four extremities, and great diminution of sexual desire and power.

There is reason to believe that loss of the knee-jerk is in some cases the first, and in the majority of cases one of the first, symptoms of tabes spinalis. The diagnostic importance of this phenomenon, and of the modifications which it undergoes in certain cerebral and spinal diseases, is now almost universally acknowledged; and it is not too much to say that we owe a debt of gratitude to the distinguished physician and teacher who first drew our attention to it, for the new light which the study of this symptom and its modifications has thrown upon many obscure conditions of the nervous system. It seems singular that even now this symptom is very little thought of in France. Vulpian, in his otherwise very able lectures on diseases of the nervous system, makes a sneering remark about the discovery "which Westphal thinks he has made;" and Fournier laments the uncertainty which attaches to the diagnosis of the early stages of tabes, when such a symptom as this is within his reach.

It is not necessary for me to allude in this place to the different theories which have been started concerning the causation of the knee-jerk, nor to the diseases of the motor sphere in which it may be lost, such as infantile paralysis, pseudo-hypertrophy of the muscles, and atrophy from neuritis, such as occurs after diphtheria, &c. I will only add that in order to be pathognomonic for tabes, Westphal's symptoms must be combined with good voluntary power, a proper faradaic response, and idio-muscular contraction of the quadriceps femoris in response to direct percussion.

While, therefore, *loss* of the knee-jerk habitually indicates tabes spinalis, even where other symptoms seem to point in a different direction, its *presence* or *exaggeration* will show us that, although many symptoms of tabes may be present, yet the case is not one of locomotor ataxy or sclerosis of the posterior columns of the cord, as generally understood. In such cases, which are far from uncommon, we have rather to do with a combined system—disease of the posterior and lateral columns, or with insular disseminated sclerosis, than with tabes spinalis. The exaggeration of the knee-jerk is then to be explained by the sclerotic irritation of the lateral columns, which is too powerful in its effects to be neutralised by the disease of the posterior columns. Lightning pains are mostly absent, and the difficulty in walking is rather owing to paresis than to ataxy, or to a combination of these two conditions.

In February, 1883, a miller, aged thirty-one, married, and father of two children, was admitted into the hospital under my care. He denied any syphilitic infection, and attributed his illness to the severe chills which he had habitually experienced in his business. Twelve years ago he had broken his right leg, and there was now a large exostosis on the tibia, which but for this history might have been looked upon as one of a syphilitic character. His present illness commenced three years ago, when he lost his taste and had double vision. At the same time he found that he could not walk so well as before, more especially in the dark. After a time the sense of taste gradually came back, and he saw things single again; and two months after having first been taken ill the power in the legs improved so much that he thought he walked as well as ever. Twelve months ago, however, he began to get worse again, and the disease has since then gradually gained upon him. On examination the brain and cranial nerves appeared to be healthy. The patient complained of a sensation as if he had a tight rope round his chest, of difficulty in retaining the urine, obstinate constipation, and complete loss of sexual power. He felt numbness in the hands, and had some degree of ataxy in the upper extremities, more especially when he attempted to write. His gait appeared to be a mixture of ataxy and paresis, as there was decided loss of muscular force together with jerkiness; the patient had to manœuvre with his arms while walking, as otherwise he felt too unsteady to go on; and on shutting his eyes he staggered to such an extent that he would have fallen unless supported. He also complained of numbness in the soles of his feet; but he had never had lightning pains or any other kind of pain. On testing the deep reflexes, I found them all very much exaggerated, and I therefore concluded that the case was not one of tabes spinalis, but one of an unusual form of insular sclerosis of the spinal cord, which had affected several strands of fibres in that organ, but had spared those which are more particularly concerned with the sensation of pain, and deep reflex action in the posterior columns. The absence of lightning pains is, however, not invariable in such cases, as shown by the instance of an Irish farmer, aged fifty-one, married, and father of two children, who consulted me in October, 1882. He complained of incontinence of urine, loss of sexual power, obstinate constipation of the bowels, inability to walk in the dark, numbness, and occasional attacks of lightning pains in the legs, the muscles of which were thin and flabby, and several other symptoms. He had had syphilis badly ten years ago. The patellar reflexes were greatly exaggerated, and I therefore concluded the case to be one of a combined system-disease of the lateral and posterior columns.

A case in which there was a very marked combination of paresis and ataxy was that of an accountant, aged thirty-two, single, who was sent to me by Dr. Haussmann of Wildbad, in October, 1879. This patient had knocked about town a good deal ten years ago, and had then had a chancre which was followed by a large crop of secondaries, chiefly on the skin and in the throat. Two years afterwards he had repeated attacks of neuralgia and aphasia, and was inefficiently treated in Java, the Cape, St. Helena, and various other places. He was better and worse off and on, but about three years ago began to suffer from more definite symptoms of spinal disease. He had now the greatest difficulty in getting up from a chair, in standing and walking. There was great loss of muscular force, more particularly in the right leg. The bladder was so irritable that he had constant desire to micturate, and there was incontinence during sleep. The bowels were obstinately constipated; the sexual power almost entirely gone. The knee-jerk was greatly exaggerated on both sides, and it was therefore evident that the case was one of combined system-disease of the cord. In this case likewise no lightning pains had occurred at any time.

Harley-street.

SOME OBSERVATIONS ON THE

SPINAL CORD IN HEALTH AND DISEASE AT THE REGION OF THE FOURTH AND FIFTH DORSAL VERTEBRÆ.

By ALEXANDER HARKIN, M.D., F.R.C.S.,
CONSULTING PHYSICIAN TO THE MATER INFIRMORUM HOSPITAL, BELFAST.

IT may be safely affirmed that in these days of progressive medicine and scientific investigation the department of neurology is the most advanced and the most prolific in results, and that through the labours of its votaries in this country, on the Continent, and in America, our knowledge of the causes, the nature, and treatment of nervous disorders is being enriched by an almost daily increment of valuable discovery. Much, however, as neurological science owes to the specialist and to experimental research, it should not be forgotten that to clinical observation and correct symptomatology many important discoveries must be accredited. Marshall Hall in our own country, and Duchenne of Boulogne, whose original researches have made their names immortal, were not specialists in any sense of the

term; they were great clinical teachers and voluminous writers, who, whilst labouring in the wide field of general medicine, allowed no limits to be put to their thirst for scientific inquiry. The spinal cord and its envelopments have engaged the special attention of neurologists, and their diseases, whether functional or organic, have also supplied material for the gravest consideration; our knowledge of their intimate nature and causation has thus been commensurately advanced; and we may reasonably hope, through the classification and subdivisions of the spinal axis recently proposed by French and German *savants*, to attain to greater accuracy in the treatment and prognosis of this interesting class of disorders. Up till the time of Budge and Waller no attempt had been made to subdivide the spinal cord into pathological regions; these eminent physiologists, indeed, only mapped off the cervical and upper portions of the dorsal vertebræ, under the name of the centrum cilio-spinale, because they found that irritation of this region produced dilatation of the pupil, through the action of the cervical sympathetic upon the iris. It is, however, with a region of much smaller dimensions, but possibly of even greater importance, that we have to concern ourselves at present—viz., that portion of the dorsal cord covered and limited by the fourth and fifth dorsal vertebræ. For many years, and soon after my introduction into practice, I had invariably observed in every case of hysteria, chorea, neuralgia, facial paralysis, and other neuroses in females, the co-existence of pronounced spinal tenderness on pressure over the fourth or fifth, more frequently the fourth and fifth dorsal vertebræ; with this practical result, the almost invariable and rapid cure of those maladies by remedies applied over these vertebræ alone. At first I regarded these manifestations as attributable to the peculiarity of the female constitution, its sensitive nervous system, its proclivity to emotional influences, and its general structural excitability; but, soon after recognising a similar condition of the spinal column in males so affected, I perceived that it was not referable to the female habit of body alone, but to localised lesions of distinctive character common to either sex, which in the absence of a more technical nomenclature might be considered as a form of so-called "spinal irritation." Still further observation elicited the extraordinary fact that this local spinal peculiarity, which at first I had looked upon as a morbid symptom, and the heritage of enfeebled constitutions, was in reality the normal condition of every healthy individual as well, of every age and class.

For statistical purposes some years since I instituted a special examination of healthy persons of various ages and positions in groups, such as inmates of industrial schools, reformatories, &c., and men in the public service, with the following result:—1. Of 131 female children and girls, from six to sixteen years of age, inmates of the Female Industrial School, Crumlin-road, Belfast, whose spinal columns I examined separately, and in the presence of the matron on May 16th, 1881, everyone complained of acute pain when tapped with the knuckles over the fourth or fifth dorsal spines, and a large number on the fourth and fifth; no pain being spoken of when the remaining twenty-two spinous processes were similarly treated. 2. Of thirty-five women of various ages confined in the penitentiary at Ballynafeigh, near Belfast, whose vertebral prominences I examined along with a medical friend on May 24th of the same year, whilst the greater number complained loudly when percussed over the fourth or fifth dorsal, a number resented the examination, were sulky, and gave indefinite answers. 3. Of thirty-one lads committed for crime to the Malone Reformatory, Belfast, whom I similarly examined on May 26th, 1881, separately and in the presence of their medical attendant, and whose ages ranged from eleven to nineteen years, each one yielded with a cry of pain when tested similarly over one or other of these processes; about one-half over the fourth, four over the fourth and fifth, and the remainder over the fifth alone. 4. Of 300 men between twenty-one and sixty-five years of age, members of the Royal Irish Constabulary, equal in physical development to any men in a regiment of the line, and under my professional care, whose vertebral columns I examined at various times, every man shrank with an expression of pain when similarly tapped over the fourth or fifth dorsal, the great majority over the fifth, some on the fourth and fifth, the remainder on the fourth only, and, like the other classes examined, exhibited no signs of pain or inconvenience when the remainder of the spinal column was similarly examined. Of the existence of this limited zone of spinal hyperæsthesia in the healthy subject, anyone may satisfy himself by tapping sharply over the dorsal spines of a friend, when the phenomena I have noted will at once become evident; or, if still doubtful, he can experience in his own person its reality, through the instrumentality of another; but the knuckles or the percussion hammer must be made to strike the spinous processes vertically and not at an obtuse angle, or in a careless or perfunctory manner, as otherwise disappointment is likely to result. The pain experienced over these sensitive points is peculiar; some compare it to an electric shock diffused over the chest and arms, others liken it to the tingling sensation caused by a knock upon the ulnar nerve at the bend of the elbow, and all declare that it is of a most disagreeable nature. It is evident that the constant presence in the healthy and the delicate constitution of this latent form of spinal hyperæsthesia must, to a great extent, affect the teaching of those writers upon spinal pathology who regard tenderness on pressure upon the vertebral column between the shoulders as a pathognomonic sign of spinal disorder. It had been for many years regarded as such by myself; but the fact of so many painful affections having been thoroughly cured by counter-irritation over this spot made the conclusion appear to me as absolutely certain; yet I was mistaken; for, paradoxical as it may appear, although counter-irritation in this place rapidly removed the complaint, yet when the raw surface healed up and the cure was complete, the original spinal tenderness remained as pronounced as at first.

Among the ailments which yielded so rapidly to the counter-irritant treatment were trigeminal neuralgia, facial paralysis (Bell's), acute hysteria, dysmenorrhœa, the reflex vomiting, the neuralgic toothache and the pruritus pudendi of pregnancy, gastralgia and other neuroses; and when vesication was the method adopted, I was generally able to assure the invalid that in five hours, coincident with the formation of the blister, all painful symptoms would permanently take their departure. By neuralgia I mean the typical disease of remittent character generally, but not always departing at night, to recur at the same hour every morning, or *vice versâ*, and not that hybrid ailment, principally rheumatic, so often miscalled; chorea has almost always yielded to this plan of treatment, with some important exceptions, including the chorea of pregnancy, and that form depending on organic cardiac disease. The dysmenorrhœa of neuralgic type yields readily, and I have not once failed for many years by a single vesication over these vertebræ to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache, and the pruritus pudendi of the puerperal condition, yield as readily, and to one application.

In our present imperfect knowledge of spinal pathology, it is not easy to explain how it is that remedies applied solely to this limited area of the spinal column can control and cure disease located in the periphery and in distant organs. I have failed to obtain any proof that any fibrillary connexion can subsist between the dorsal cord or nerves and those conducting motor or sensory power to the organs under consideration. There is nothing peculiar in the structure or dimensions of the cord at the mid-dorsal region save that it is narrower and more compact than in other parts of the neural axis. The fourth dorsal spine, according to Gowers, corresponds to the origin of the sixth dorsal nerves, and the fifth to that of the seventh pair, and these are the nerves which might naturally suffer from the pain due to percussion on the corresponding spinous processes. But this, if true, would not remove the difficulty. While we are still unacquainted with many of the causes which excite or depress the sympathetic and its spinal centre, the controlling influence of this plan of treatment appears to confirm, to a certain extent, the teaching of Mr. Pridgin Teale, who believes that there exist an etiological relation between an irritable state of the spinal cord and sympathetic ganglia and neuralgic troubles in remote organs. Mr. Teale's propositions, however, only cover a portion of the subject, as, in his own words, "they refer chiefly to phenomena exhibited in those remote parts to which the nerves from the diseased portion (cord or sympathetic ganglia) are distributed." It does not explain the difficulty that counter-irritation of an area unconnected by nervous filaments with the seat of pain or paralysis will also as rapidly stifle the disorder. Being desirous of obtaining from a high authority a scientific explanation of the coexistence of this limited area of latent hyperæsthesia with neurotic disorder in distant organs, I wrote to Dr. Brown-Séquard in the summer of 1870,

requesting the favour of his opinion on the subject. I received a polite reply in August of the same year from Paris, just before the Prussians had closed in upon the doomed city. In that letter he says: "Why it is that some parts are more particularly attacked with vaso-motor spasm and others with vaso-motor paralysis we do not know, and therefore I cannot answer your question; but I can say that the morbid sensibility of the spine at the level of the fourth dorsal and of the seventh cervical is a sign of anæmia and hysteria, and that persons in health are free from it." At that time I was not myself cognisant of the fact that "persons in health" were as obnoxious to this "morbid sensibility of the spine at the level of the fourth dorsal" as the most neurotic sufferer. Why it is so I think it is needless to speculate. I fear it must be regarded as one of those conditions inherent in the human constitution which is beyond our power of elucidation; not so, however, when we inquire why counter-irritation upon a specified area of the human integument relieves pain or restores motor power in a distant part of the body. There is every reason to believe that, with due observation and well-directed experiment, a clear solution will be found, and already we may perhaps claim to have obtained an approximative explanation of the phenomenon. Treating on the subject of mechanical vibration for the relief of pain, Dr. W. J. Morton of New York says: "The general law which governs the relief of pain by counter-irritation has been recently formulated by Brown-Séquard, who, after careful experimentation, announced the general principle that general and local anæsthesia could be produced in the lower animals by applying to their peripheral nerve distribution a strong counter-irritant, like a few drops of chloroform, and that the anæsthesia was explicable on the theory of inhibitory action. A drop of chloroform on a guinea-pig's neck produced general anæsthesia. Here was an explanation of counter-irritant procedure in medicine. It requires little imagination to figure the time when a certain localised and known peripheral area of the human skin may be counter-irritated in order to produce an inhibition of pain in some spot far distant. At present the counter-irritation is applied as near as possible to the seat of pain. Undoubtedly many of the cures or reliefs of pain that are effected by general peripheral treatment, like slapping, rubbing, stroking with the hand, general applications of electricity, &c., are due to impressions on the fine peripheral network of the sensitive nerves, and conveyed to centres which set up inhibitory or relief responses, in their turn curative."[1] These suggestive words give perhaps the best available explanation of the pathological condition I have endeavoured to describe, and why "a certain localised and known peripheral area" of the human skin may be counter-irritated in order to produce an inhibition of pain in some spot far distant.

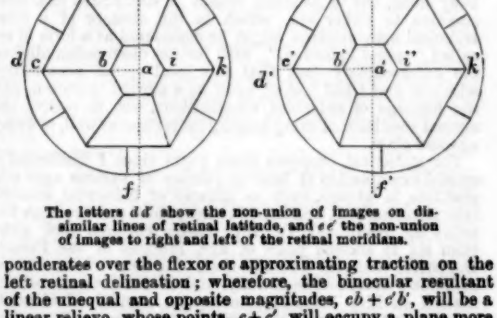
THE SECONDARY NATURE OF BINOCULAR RELIEF.

BY BRIGADE-SURGEON T. OUGHTON, A.M.D.

(*Concluded from page 14.*)

WITH a clear conception of the foregoing premises, the present hypothesis will be understood without much difficulty, and stands thus: Binocular relief is intrinsically the coaptation of a greater retinal image with a lesser correspondent retinal image, of a greater visual angle and its objective magnitude with a lesser visual angle and its objective magnitude; herein is comprised that compression which is essential to all relievo perceptions, whether tactile or visual. When the retinal images are precisely similar, we shall find that the image in one eye is under an extensor influence providing the image in the other eye is under a flexor influence, and these two influences will be of equal intensity; as a consequence, the object will be seen flat and without relief, being either coincident with the plane of the horopter (a plane at right angles to the median line of sight at the intersection of the optical axes), or with a plane that is parallel thereto. When the retinal image is greater than its fellow, the object will be seen in a concave relief relatively to the fixed binocular centre or horopter, providing the greater image is under an extensor influence; further, it will be seen as a convex relief relatively to the binocular centre when the larger image is under a flexor or approximating influence. In viewing the figures of the annexed diagram (the outlines of a direct bird's-eye view of a hexagonal monument standing on a circular pediment, drawn from two points of sight corresponding to the interocular distance), either in a stereoscope or by converging the eyes beyond the paper on which they are described, *R* will represent the delineation on the right retina and *L* that on the left. The most noteworthy facts are: First, that the pair of smaller hexagons are precisely similar, and the corresponding objective hexagon is a superficies that is coincident with the plane of the horopter; secondly, that the pediments are alike, and their corresponding objective is situated in a superficies beyond and parallel to the superficial hexagon; thirdly, that the pyramidal delineations are dissimilar, and are visible in an alto-relievo. In the stereoscope the delineations will be magnified, thereby proving that the extent of retinal area that is impressed does not affect the argument, which is as follows.

Converging the eyes on the points $a a'$, so that the dotted lines ef and $e'f'$ shall indicate meridional lines of the retinæ, the larger segment, edf, of the right internal retina has to be accommodated to the smaller segment, $e'd'f'$, of the left external retina; hence the proximate causation of apparent relief. Every point in the segment edf is under an extensor influence, and every point in the segment $e'd'f'$ under a flexor influence. These opposite influences are equal in respect of the equal dotted lines ab and $a'b'$, and also of the equal dotted lines dc and $d'c'$; wherefore, extending a similar argument to both sides, the smaller hexagon and the pediment will be superficial extensions in the binocular resultant. The magnitude cb is greater than the magnitude $c'b'$—that is, the extensor traction on the right retinal delineation preponderates over the flexor or approximating traction on the left retinal delineation; wherefore, the binocular resultant of the unequal and opposite magnitudes, $cb + c'b'$, will be a linear relievo, whose points, $c + c'$, will occupy a plane more remote than that of the fixed point, $a + a'$. A similar train of argument will, of course, be applicable to the right side of the apparent pyramid—namely, the extensor influence is to the flexor influence as the magnitude $i'k'$ is to the magnitude ik. If, in the next place, the diagram *R* represents the delineation on the left retina, and diagram *L* that on the right, the preponderating influence of magnitude cb over magnitude $c'b'$ will now be of a flexor nature; consequently, the points cc' will be approximated so as to occupy a plane nearer than that of the fixed points aa', and the pyramid will appear in sub-relief with the pediment in the foreground. This result may be effected either by transposing the above diagrams for the stereoscope, or by coalescing them by a process of strabismus; the latter is found to be a painful and impracticable procedure by many, but long-sighted persons usually adopt it. It is said that the binocular resultant is a beautiful miniature relief posed in mid-air between the observer and the plane of the paper—that is, at the site of binocular convergence. Brewster's theory of visual relief, it may be noted, explains the apparent position of the points on which the optical axes converge in this case, but it fails to account either for the apparent position of the entire miniature relievo or for the miniature creation.



The letters dd' show the non-union of images on dissimilar lines of retinal latitude, and ee' the non-union of images to right and left of the retinal meridians.

It must be clearly defined what is meant by the term "retinal delineation" in the above argument; certainly it cannot mean the actual images on the retinæ, because the centre of the retinal curvature is acknowledged to be non-

[1] Transactions of the American Neurological Association, July, 1882, p. 537.

coincident with the centre of visible direction. The complications which have resulted from the want of coincidence between these centres in all diagrammatic attempts to explain the facts of binocular relief have been very perplexing; but the doctrine of secondary perception, as I have attempted to elucidate it, does not regard the actual perspective portrayed on the retina in any material degree whatever. The delineations really referred to are such as would be represented on an imaginary retina that is described about the centre of visible direction; they are supposed to be depicted on sensorial retinæ marking the path which any minimum visibile would traverse during rotations of the eyeball, by which the present subject is considerably simplified. Further, by no other means can the magnitude of a given visual angle be adequately expressed by the equivalent magnitude of a retinal delineation. It will be good practice, on the above principles, to solve the monumental relievo appearance on the datum that the eyes are converging on the remote points, *d d'*, of the diagram.

One prominent fact touching binocular relievo is that it rapidly diminishes with the distance of the object; thus a sphere will be perceived as a disc at the distance of forty or fifty feet. The present hypothesis covers it in this manner: as the object recedes to a greater distance, its delineations become more similar, the forces of flexion and extension become more equalised, until a disc is ultimately perceived with two precisely similar perspective impressions—for example, in the diagram, let the objective outlines of the pyramid be rendered more similar by increasing the interval between the smaller hexagons, stereoscopy will present a pyramid with diminished relief; so, an actual objective pyramid is seen with diminished relief at a distance, and for a like reason—namely, as it recedes the extensor influence, *c b*, of the right retinal delineation becomes lessened, whilst the flexor influence, *c' b'*, is augmented in an equal ratio; in other words, the balance of muscular influences operating on the resultant point, *c+c'*, is in favour of approximation. Conversely, let the outlines of the pyramid be rendered more dissimilar by approximating the smaller hexagons, *c b* (extensor force) will be greater, and *c' b'* (flexor force) less than formerly; but such outlines are the perspectives of an actual pyramid at a nearer distance, and seen with a more pronounced relievo. It will be unnecessary to deal with concave reliefs at a greater and less distance, since a like line of reasoning will be obviously applicable to their treatment.

Two or three exceptional facts cannot be disregarded with due justice to this subject. If, in the first place, the stereoscopic perspectives of a human face be transposed, the features will be found to retain their natural positions, as viewed in a stereoscope, instead of appearing as a concave mask. This is one of those stunning perversions of sense which occasionally baffle the ingenuity of mental physicists, and suggest unsatisfactory explanations, relegating such phenomena to the instigation and unintelligible vagaries of a dominant *mens conscia*. But the contradiction is an apparent one, merely evidencing that the factors of binocular relievo are eclipsed by another force of positional proximity—viz., the visual angle. Perceptions of visual angles are a monocular faculty; visual angles are the basis of perspectives and monocular relief, and different perspective magnitudes are the bases of the binocular reliefs under consideration; if, therefore, any relief that might have been forecast by the mind (the hollow mask in the present instance) be found to deceive the natural expectation, the only warrantable conclusion will be that some irregularity exists in connexion with the perspective arrangement or foundational visual angles. Granting that the hollow mask be visible in the binocular resultant, the nose with a greater visual angle than the more distant ears would be actually perceived further away, and it would intervene between and occlude objective points which an actual hollow mask would present to view. The entire circumstances of this exceptional fact are unnatural, since no binocular camera could produce a pair of facial representations transposed as above; hence I feel justified in regarding it as an instance of monocular relief, inasmuch as binocular coalescence cannot be maintained here any more than in the attempt to unite diagonal lines crossed in different directions on each half of a stereoscopic slide (experiment of Helmholtz).

Next, objective magnitudes in the plane of the horopter do not subtend angles to both eyes sufficiently equal for plane vision, or effect sufficiently similar retinal delineations within a less distance than eighteen inches from the observer.[1] Let two semicircles be described, with an interval of 2·5 in. (interocular distance), representing the sensorial retinæ above defined; then, subdividing them into an equal number of arcs (so-called corresponding points), let lines be drawn through the centres of visible direction. It will be found that corresponding pairs of lines intersect each other about Müller's horopteric circle when the point of optical convergence is three or more inches distant, the circles enlarging with increase of distance. Why are visible points stationed in such horopteric circles seen in their true positions, and not in the plane of the horopter? Again, if a magnitude in the plane of the horopter, distant about eight or ten inches, be divided into a right and left half, it will be found that each half subtends a larger visual angle to the eye on the same side than to the opposite one—clearly a result of foreshortening; in other words, the extensor influence on such a magnitude will preponderate over the flexor influence, so that it should be seen binocularly as a sphere with a convex relief. This fact seems to have reference to an interesting experiment recently published by Le Conte Stevens of New York. He constructs a pair of perfectly similar figures, each consisting of a series of concentric circles, and combines their images by crossing the optical axes; the result is said to be the appearance of a miniature buckler convex towards the observer.[2] But, whether there be a relation or no, an analogous foreshortening exists in a picture at a distance of ten inches. How is it that the objects of the picture are not perceived about a curved plane having its convexity towards the observer? Both the above questions are related to the same causative fact, and clearly demonstrate that the principles enunciated herein do not apply to objects within a distance of at least a dozen inches. The discrepancy is resolved by regarding the visual positions of such very near objects as equalling tactile position in definition, and as coinciding mathematically with the intersection of their lines of visible direction—that is, the forces influencing relievo are in abeyance to positional forces determining a directive composition, as in the case of an object at the binocular centre.

Lastly, the remarkable panoramic painting of "Tel-el-Kebir" by M. Philippoteaux *fils* (now exhibited at the Crystal Palace at Sydenham) presents reliefs of objects near and far, of horizon and sky, that are facsimiles of nature, notwithstanding the delineation is limited to a plane canvas that is only forty-five feet equidistant on all sides from the spectator. This variety of binocular relief forms part of another subject, which cannot be discussed at present; however, it is inconsistent both with the present hypothesis and with the law of visual position coinciding with the intersection of corresponding lines of visible direction. It must be understood that the present remarks are limited to relief within a distance of some fourteen or fifteen yards only—that is, the area of most useful vision.

Forest-hill, S.E.

TWO INSTANCES OF REMARKABLE ELEVATION OF TEMPERATURE.

BY LAWSON TAIT, F.R.C.S. EDIN.,
SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

THE remarkable case of elevation of temperature recorded by Mr. Teale, of Scarborough, in the Transactions of the Clinical Society is almost paralleled by the instances which I desire now to put on record.

The first case was one of removal of both ovaries for very rapidly growing cystoma, in the treatment of which I was associated with Mr. Chavasse of Wylde-green, and Dr. Thomson of Kingswinford. The operation was performed on Dec. 23rd, 1879, and presented no special difficulty, save that the tumours were of large size and practically solid. The following are the records of interest, and I may say that they were made by a competent nurse, verified by myself,

[1] The images of said magnitudes will be mathematically dissimilar at a greater distance than that stated, but such dissimilarity is too fine for visual recognition. Strict mathematical rules are, in fact, inapplicable to the phenomena of apparent relief as well as to other visual conditions. For example, were vision controlled by the mechanics of rigid mathematics, one would be able to halve a given straight line definitely at a single glance without resort to artificial admeasurement. And, further, a given relievo object would present an unmodified appearance of relief at any and every distance.

[2] Philosophical Magazine, vol. xiii., p. 313 (1882).

and that three different thermometers were used, so that no mistake might be made by error of the instrument:—

Date.	Hour.	Temp	Pulse.
Dec. 24th	7.45 P.M.	102·2°	140
,, 25th	5.0 A.M.	103·3	120
,, ,, ...	10.15 A.M.	105·3	130
,, ,, ...	2.55 P.M.	105·3	128
,, ,, ...	8.5 P.M.	111·0	120
,, 26th	9.50 A.M.	101·4	100
,, ,, ...	9.15 A.M.	101·2	99

During the night of the 25th no observations were made, as the patient was in a deep sleep, and it was not deemed advisable to wake her. Throughout the twelve hours during which the extreme rise of temperature lasted the patient experienced no uneasiness, and nothing was done specially for her condition—that is, no ice-collar or ice-cap was used. She made an excellent recovery, and has since married. She has had perfect health since her convalescence.

The second case was sent to me from South Africa, clearly suffering from chronic ovaritis. She was a hospital nurse during the Basuto war, and is a well-educated and intelligent woman, who can give an extremely clear account of her own case. Whilst lifting a heavy wounded soldier she hurt herself internally, and was immediately taken ill, the symptoms following being those of pelvic peritonitis. She was acutely ill from May 20th, 1882, till June 5th. The record of temperature observations was made by Dr. Jameson of Kimberley and Dr. Harrhy of Barkly, and four different thermometers were used. These statements are made by the patient. I have written to the gentlemen named, but have had one letter returned through the dead-letter office, and have got no reply to the other. The patient came to me in August last with enlarged and excessively tender masses on each side of the uterus. Perfect rest and treatment by counter-irritation and bromide have relieved her symptoms completely so far, and she is about to return to her duties.

Date.	Hour.	Deg. F.	Date.	Hour.	Deg. F.
May 20	8.0 A.M.	101·0	May 29	9.0 A.M.	100·0
,, 21	9.0 ,,	106·0*		Noon.	111·0
	P.M.	101·0		3.30 P.M.	101·0
,, 22	A.M.	106·0		7.0 P.M.	101·2
	7.30 P.M.	108·0	,, 30	8.0 A.M.	101·0
	P.M.	110·0		P.M.	106·0
,, 23	1.30 A.M.	103·0	,, 31	9.0 A.M.	109·0
	4.30 P.M.	110·2		10.0 ,,	100·0
,, 24	9.30 A.M.	109·0		4.0 P.M.	99·0
	Noon.	110·0		8.0 ,,	110·0
	2.30 P.M.	111·0	June 1	9·0 A.M.	109·0
	P.M.	102·0		10.0 ,,	110·0
,, 25	A.M.	102·0		12.0 ,,	110·0
	Noon.	102·0		1.15 P.M.	111·0
	P.M.	101·5		3.15 ,,	101·0
	,,	107·0		4.30 ,,	110·0
,, 26	4.0 A.M.	99·0		5.30 ,,	101·0
	9.0 ,,	99·5		7.30 ,,	100·0
	P.M.	108·0		9.0 ,,	100·0
,, 27	10.30 A.M.	102·5	,, 2	9.0 A.M.	99·0
	9.0 P.M.	102·0		Noon.	106·0
,, 28	A.M.	102·0		8.0 P.M.	100·0
	8.0 P.M.	103·2		9.0 ,,	100·0

* Cold pack.

From June 3rd the temperature rose from 99° in the morning to 100° in the evening, and in that condition I found it. This extraordinary record, of course, suggests, first of all, that it has been manufactured by a hysterical person possessed of sufficient education to enable her to forge. But the patient is not hysterical, and had abundant physical evidence of serious pelvic mischief when I first saw her. I admitted her to a private home, and had her carefully watched, and found no reason whatever to believe that she was endeavouring to deceive by presenting a manufactured register. My chief aim is that by its publication it may reach the notice either of Dr. Jameson or Dr. Harrhy, who may be able to throw some light upon it.

Postscript.—Since the above was written the patient has had relapses, and is now not so well. She has not yet gone back to her work, and I fear removal of the uterine appendages is looming for her in the future.

Birmingham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullasantem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GENERAL LYING-IN HOSPITAL, YORK-ROAD.

GESTATION; ACCIDENTAL HÆMORRHAGE; DEATH OF FŒTUS IN UTERO; ARRESTED LABOUR FROM RIGOR MORTIS OF FŒTUS.

FOR the following notes we are indebted to Dr. Robert Boxall, house physician:—

The following case of accidental hæmorrhage, resulting in the death of the fœtus in utero, presents the somewhat novel feature of arrested labour from rigor mortis of the child and consequent inability of the head to undergo its normal movements in the pelvis.

Mrs. S——, aged twenty-nine, a fairly-nourished, healthy woman, of medium complexion and rather short stature, was admitted to the hospital at the full time of her sixth pregnancy, on Oct. 17th, 1883, at 8 A.M. She had always enjoyed excellent health. Her previous labours had been natural and easy. The external pelvic measurements were: Interspinous, 10 in.; intercristal, 11¼ in.; conjugate, 7¼ in. The patient had been under observation twice before, the first occasion being on Oct. 4th, when she complained of abdominal pains. The os was very patulous, and it was thought possible that labour was commencing; she returned home the same evening. The second occasion was three days later, when pain in the back was complained of. The condition of the cervix was unaltered; she stayed in the hospital some hours. At that time the fœtal heart sounds were distinctly audible. (It afterwards transpired that on each occasion, having had a "difference" with her husband, she sought the hospital as a harbour of refuge.) On reaching home on the evening of the 7th she noticed "a show," and from this time till admission suffered much from "whites," and experienced a sense of weight in the abdomen. She felt the child's movements up till the 15th, on which date they were stronger than usual, and "something seemed to go pop inside the womb." She remarked on this to the landlady. Immediately before experiencing this sensation she had carried a bucket of water up three flights of stairs. She felt a little faint, came over pale, and was obliged to lie down. After that she felt no more of the child, but had a pricking pain in the abdomen, which kept on continuously, and she could scarcely get about. From this time till admission she felt cold shivers, which she had never experienced with any of her previous children. Labour pains commenced about 5 A.M. on the day of admission. About 7 A.M., while still in bed, the pain in the abdomen and back was very bad, and suddenly without apparent cause flooding set in, and she lost "half a pailful," at any rate enough to soak through the bed and run in a pool on the floor. She came to the hospital, a distance of about a mile, in a cab.

When admitted, a thick diaper was soaked half through with blood, and there was still slight oozing. On examination, the os uteri was found high up, fairly firm, and a little puffiness of the anterior lip. The canal would admit the finger easily. The membranes were intact. The vertex could be felt above the brim in every direction. No part of the placenta could be reached. A pinkish sero-sanguineous disharge escaped in gushes at the commencement of each pain. The pains were strong and almost continuous. The patient was not strikingly pale. Temperature 98°; pulse 108. On palpating the abdomen the usual contour of the uterus was found to be maintained. No uterine sounds could be heard. The patient was douched every half hour, and given four ten-grain doses of chloral hydrate in an hour. As the cervix expanded the anterior fontanelle could be felt forwards and to the left, high up. At 12.30 P.M. the cervix was fully dilatable, and the membranes were ruptured artificially. The head, however, would not come down. The pains preserved the same character, and became a little stronger. As no progress was made, at 1.0 P.M. forceps were applied to the head. On the introduction of the lower blade about four ounces of liquor amnii escaped, and the head rotated

into the second position. The head was easily brought down through the cervix into the cavity, and as the pains then improved in character and remained of fair strength, with about a minute's interval between each, the forceps were removed, and nature left to take its course. The head was born at 1.45 P.M., a loop of pulseless cord following its expulsion. Though the pains were strong, the trunk was arrested. There was no attempt at restitution. With suprapubic pressure, and slight traction on the head, delivery was completed. There was no caput succedaneum. The child, a female weighing eight pounds and a quarter, and measuring twenty-two inches, was of a mottled blue colour, and stiff, as if rigor mortis had set in. This passed off in about an hour. The placenta followed the child into the vagina, and was expelled by natural efforts almost immediately after. About twelve ounces of recent clot was adherent to the uterine surface of the placenta. The portion of clot adjacent to the placenta was brownish, and detached without difficulty. The uterine surface of the placenta was a little gritty, and very smooth, yellow, and fatty-looking, from a thin lamina of fibrin covering its whole area. It also presented two yellowish fibrous masses, each about the size of an almond, near the centre, and another situated an inch from the edge, the size of a haricot bean. Nearly all the vessels on the fœtal surface were empty, and at the margin of the same surface were three pinkish laminated clots, not larger than almonds. The substance of all the cotyledons was softer in consistence than natural. The membranes, which formed an entire bag, measured fourteen and four inches respectively, in the greatest and least distance of their rupture to the margin of the placenta.

The temperature after labour was 98·4°; the pulse 72. The loss subsequent to expulsion of the placenta was almost *nil*. She had slight after-pains and retention of urine for the first twenty-four hours, but made a satisfactory recovery. Beyond a slight attack of urticaria, and a little pain in the breasts on the fourth and fifth days, the puerperium presented nothing calling for note. She left the hospital quite well on Oct. 30th.

CHESTER GENERAL INFIRMARY.

ABSCESS OF KIDNEY; ASPIRATION OF FORTY-TWO OUNCES OF PUS; COMPLETE RECOVERY.

(Under the care of Dr. DOBIE.)

FOR the following notes we are indebted to Dr. H. W. King, late house surgeon.

Arthur H——, aged thirty-six, a labourer, was admitted on January 4th, 1883. Upon inquiry the patient stated that his general health had been fairly good. Three months previously he caught cold from sitting on some damp grass. Soon afterwards he began to feel pain in his right side and back; he attributed this to rheumatism. Six weeks before admission the pain increased, and he was obliged to give up work. About this time he noticed a swelling in his right side; this had lately increased in size. He had been able to take very little food, had been feeling very weak, and suffered from night-sweats. His "water had been very thick" of late.

Upon examination a prominence was noticeable on the right side of the abdomen. Its point of highest projection was about one inch and a half from, and in a horizontal line with, the umbilicus; the skin over it was slightly pink in colour. There was a rounded swelling in the lumbar region, and laterally, continuous with the fulness in front. On percussion, absolute dulness existed in the right mammary line, and externally to it, from the upper border of the liver to the lower border of the tumour, about three inches above Poupart's ligament. Internal to this line there was a triangular patch of resonance (stomach), its apex outwards, between the liver and the tumour. Posteriorly dulness existed over the whole lumbar space. On palpation the tumour was movable, not adherent to the skin, and apparently not attached to the liver; but owing to the exhausted condition of the patient, the effects of forcible expiration could only be approximately judged. There was very evident fluctuation, especially where the tumour was most prominent. A thrill could be felt on percussion through the whole width of the tumour. Heart, lungs, and chest generally normal, but pulse weak (124), and breathing quick (28). Temperature ranged from 102° to 101·4° at night to 99·2° to 99·6° in the morning. Urine turbid, yellowish; after standing in a urine glass for two or three hours a yellowish deposit occurred of about half. Microscopically very numerous pus cells were seen, with some blood-corpuscles, renal epithelium, and amorphous urates. Dr. Dobie recommended that the tumour should be aspirated. On the afternoon of Jan. 10th forty-two ounces of thin but healthy-looking pus were removed by the aspirator in about an hour and a half. A needle corresponding in size to a No. 2 trocar was used. The patient at once felt much relieved, but had pain near the point of election for aspiration, which was in the centre of the prominence. Later in the evening the pain increased, and extended round to the back. The patient's legs were drawn up. One-third of a grain of morphia given subcutaneously relieved the pain and afforded sleep. The peritonitis continued for three or four days, and much consequent anxiety was felt as to the result. Opiates and hot fomentations relieved the pain, and the patient was able to take fair quantities of milk. The tumour diminished greatly in size, and dulness was now only present on the extreme right of the abdomen and in the lumbo-dorsal region. On Jan. 5th, the morning after the aspiration, there was much less pus present in the urine, but this very small amount gradually increased, until on Jan. 17th the deposit was about one-sixth. The patient, however, continued to improve in health and to get stronger. The urine continued to have a considerable deposit of pus—one-tenth to one-sixth. A lumbar incision was proposed, but the patient refused further treatment, and returned to his home near the seaside. He subsequently became completely restored to health, and was able to follow his usual employment. He was admitted into the infirmary early in May of the present year for an ulcer of the leg; and his urine, then examined, was found to be perfectly normal, and had not a trace of albumen. There was, however, still considerably greater dulness on the right lumbo-dorsal region than on the left. But the patient looked, and asserted that he felt, quite well.

NORWOOD COTTAGE HOSPITAL.

CASE OF OVARIOTOMY.

(Under the care of Dr. J. H. GALTON.)

J. W——, aged thirty-four, needlewoman. No family history of tumours. The patient had had good health. Menstruation had been regular except for the last two months, during which she has seen nothing. Four years ago she first noticed a lump in the right side, which gradually got larger. Her increase of size she attributed to sitting at her employment. She experienced no pain till April 11th, 1884, when she went for a long walk and had a "stitch" in the right side. From that time she had a good deal of pain about the middle of the right lumbar region.

On April 15th the abdomen measured forty inches and a half round the umbilicus, was dull all over the surface except below the ribs and in the flanks. She had a thin, anxious, ovarian look; tongue clean; pulse 74; bowels regular. The uterus was normal to sound and freely movable; the whole of the roof of the pelvis was filled in with an elastic-feeling mass.—April 24th, 11.30 A.M.: Pulse 98; temperature 97·8°. The ward having been duly prepared and heated to the temperature of 64° (at which it was kept for ten days after the operation), and chloroform having been administered by Dr. Brockwell with Jünker's apparatus, an incision was commenced in the median line one inch below the umbilicus, and continued downwards for four inches. One vessel was ligatured and a few others twisted (the incision, though in the median line, went through the rectus muscle). Bleeding having ceased, the peritoneum was divided to the length of the incision on a Hey's director; a small quantity of ascetic fluid escaped, and the tumour was tapped by Simpson's trocar. Eighteen pints and a half of clear fluid were removed. The cyst was drawn forwards with great difficulty, recent adhesion on the right lower portion being separated by the hand. Four separate cysts were tapped, the last containing very glairy fluid, which would not pass through the large trocar. At the posterior part of the tumour a good deal of solid growth much interfered with the withdrawal; the pedicle was transfixed, and, a twisted silk suture having broken in the second ligature, a second transfixion was made and a thick silk suture was passed through tied in two places and dropped in. A small quantity of fluid was sponged out, and no further could be expressed by pressure upon the abdominal

walls; four twisted silk sutures were passed (threaded on double needles) through the peritoneum and buttoned, one silver suture closing the superficial part of the wound below. Antiseptic dressings were applied, no spray being used during the operation. The operation took one hour and ten minutes. Ten drachms of chloroform were used. The weight of the solid removed was 3 lb. 1½ oz. At 1 P.M. half a grain of morphia suppository was given; slight sickness, brought up some food. Pulse 74; temperature 96·8°. Ordered twenty minims of the sedative solution of opium every six hours. Urine to be drawn off every six hours. Ice also to be given. 6 P.M.: Pulse 88; temperature 96·8°. No pain, except slight in back. 12 P.M.: Pulse 88; temperature 99°; perspiring freely.—25th, 6 A.M.: Temperature 100°. 9.30 A.M.: Pulse 90; temperature 100°. No pain or sickness; has slept during the night at intervals. Ordered one tablespoonful of beef-tea every hour. 4.30 P.M.: Pulse 98; temperature 100·8°.—29th, 11 A.M.: Pulse 104; temperature 99·8°. Inclination to go to stool at 9.30 A.M.; passed four ounces of urine while at stool.—30th, 10 A.M.: Pulse 118; temperature 100·6°. To take milk thickened with arrowroot, and an ounce of champagne every two hours. Wound dressed beneath the green protective; small quantity of dirty-looking, ill-smelling discharge. The buttons inverted into the wound, which appeared closed except at the surface. Slight distension of abdomen, no pain on dressing; an enema of half a pint of gruel brought away about a quart of liquid motion; also passed water naturally. 4.30 P.M.: Pulse 108; temperature 100·2°. Has slept well for three hours; no jumping. 10 P.M.: Temperature 100·4°.

May 1st: Pulse 118; temperature 100·4°. Has a bad collapsed look. There is a swelling of the right upper corner of the wound. Removed all deep sutures; in only one a little pus followed. No tenderness. Ordered two drachms of brandy every two hours. 3 P.M.: Pulse 116; temperature 100·4°. Looks better. At 1 P.M. passed urine naturally. Sick at 9 P.M. 11 P.M.: Pulse 107; temperature 100·2°.—2nd: Pulse 112; temperature 99·6°. Bowels acted naturally, and passed urine.—4th: Pulse 108; temperature 100·2°. On dressing the wound found surface adhesion giving way, and a small quantity of pus oozed from the right upper suture opening. Removed strapping. No offensive smell. Dressed with carbolic lotion and lint pad on either side of wound, fixed with broad strapping. Ordered two ounces of port wine and fish. 10.30 P.M.: Temperature 99·2°.—7th: Pulse 88; temperature 98·4°. Bowels action frequent, passing gritty foul-smelling semi-liquid motion. Ordered one drachm of castor oil and fifteen minims of tincture of opium. 10 P.M.: Temperature 99·6°.—8th: Pulse 88; temperature 98·4°. The oil acted once; no diarrhœa since. Placed patient on her right side to relieve back. 10 P.M.: Temperature 99·2°.—9th: Pulse 84; temperature 98·2°. Bowels acted once naturally. About two inches of the superficial part of the wound remain. No discharge. Dressed with dry lint. Ordered middle diet, with two eggs; to continue the port wine. 10 P.M.: Temperature 98·8°.—11th: Wound entirely healed, and progress continued uninterruptedly.

Remarks.—The case is of interest as showing that our cottage hospitals are equal to the demands of the larger surgical operations, and much of the success was owing to the careful and devoted attention of the nursing staff. A great advantage over the same operation in the London hospitals consists in the steadiness of the assistance rendered by the surgical staff of the hospital and others (Drs. Miller, Hetley, and Messrs. Sidney Turner, Gandy, and Pimmer), which was more reliable than that of comparatively untried students. The superior purity of the air is also an advantage for the cottage hospitals. The rapid improvement of the case on the removal of the deep sutures on the seventh day is worthy of notice, as also the failure of buttons to retain their place on the sutures, thus interfering with the surface healing. The large quantity of urine passed during the early days after the operation is remarkable—viz: First day, forty-four ounces; second day, sixty-six ounces; third day, forty-eight ounces; fourth day, forty ounces.

AT the inquiry into the circumstances attending the death of Mrs. Cutler (widow of the late Edward Cutler, F.R.C.S., Surgeon to St. George's Hospital), who died from injuries she received by being thrown from her carriage on the 4th inst., the jury returned a verdict of "Accidental death."

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Retro ocular Neuritis. — Amblyopia. — Irido-choroiditis. — Proptosis with Gland Enlargement.

A MEETING of this Society was held on July 3rd, Mr. Jonathan Hutchinson, F.R.S., President, in the chair. The President's paper was decidedly interesting to general medicine, and elicited considerable discussion.

Mr. NETTLESHIP read a paper on some cases of Retro-ocular Neuritis, in which acute inflammation seemed to take place in some small part of the course of the optic nerve. They were characterised by failure of sight in one eye, often accompanied by neuralgic pain in the temple and orbit, and pain on moving the eye. The disc often became more or less atrophic in a few weeks; the result was variable from complete recovery to total blindness. Two illustrative cases were quoted, the first being that of a lady aged thirty-four, in whom an attack of central amblyopia in the right eye was associated with pain in and around the eyeball, and followed by pallor of the disc. The patient had previously suffered from sciatica, and several of her relations had had gout or arthritis. The second case was that of a man aged fifty, who had rapidly and completely lost the sight of his right eye, and who presented no sign of cerebral disease; there was no evidence of syphilis or gout, the only thing being that some time previously the patient had had diplopia from paresis of the right inferior rectus. The failure of sight was usually at its worst in three days, except in the most severe cases; recovery when complete usually required about six weeks. The pain, which was often circumorbital, began before the dimness of vision, and there was a sense of stiffness on moving the eye quickly. In the majority of cases examination of the field of vision revealed the existence of a central defect; sometimes the field was contracted, at others this sign was absent. Changes in the disc were by no means constant, even in the worst cases. The cases had to be distinguished from embolism of the central artery; from progressive atrophy where one disc was affected before the other and from unioocular neuritis due to disease of the corresponding lobe of the brain. The greatest difficulty would be to distinguish them from the rare cases where a single violent papillitis occurred with severe localised pain. In some of his cases the symptoms might be explained by a periostitis of the optic canal; in others the mischief could not have been so far back; in some a rheumatic origin seemed probable. The majority of the patients were between twenty-five and forty. At least five of the twenty-four had had syphilis, and there was a good probability of it in six others. In four cases the affected eye became permanently blind; in eight more or less damage was done; twelve (exactly half) recovered.—Mr. JONATHAN HUTCHINSON said that he had met with a case in a young lady in whom there was a marked arthritic history. The blindness completely passed away. It was probably a case of gouty disease of the optic nerve.—Dr. STEPHEN MACKENZIE asked whether any examination of the blood had been made. It was known that slight papillitis might occur in leukæmia, and was supposed to be due to thrombosis of the orbital veins; in these states of blood also a diffuse retinitis may arise. He had not met with any cases of the kind; they were not cases seen in medical practice. It must be confessed that Mr. Nettleship had not given a satisfactory explanation. In the cases following "fever" what was the length of time between the "fever" and the neuritis?—Dr. C. E. FITZGERALD briefly related a case of dimness of vision in the left eye in a young lady in whom very slight ophthalmoscopic changes were present. This first attack ended in complete recovery of sight, but was followed by a recurrence of the same symptoms in the same eye after some months. Somewhat later the right eye had become affected and with intense neuritis. Later still loss of power of the right leg and arm set in. Ultimately there was improvement in all respects; vision of the left eye became nearly normal though there still existed slight haziness of the disc. There was a history of old "rheumatic" affection, and Dr. Fitzgerald regarded the case as arthritic in nature.—Mr. NETTLESHIP, in reply, asked Mr. Hutchinson what degree of blindness existed in his case.—To this the PRESIDENT replied that the

patient was quite blind of one eye. There had been no severe pain and the patient remained free from visual affection until a threatening of the same thing began in the opposite eye.—Mr. NETTLESHIP said, with regard to the blood, nothing had been noticed wrong in their general appearance, though no special examination was made. In one case the neuritis set in within one month or six weeks after the "fever," which was either malarious or typhoid. At present it was but guesswork as to the nature of the disease. The cases were not all of the same nature. Periostitis of the optic foramen was probably present where the pain was intense and late ophthalmoscopic changes occurred. Small gummata on the nerve would explain all the symptoms.

Mr. LAWFORD read notes of a case of Central Amblyopia coincident with Peripheral Contraction of the Fields of Vision. The patient, a lad aged eighteen, noticed failure of vision about five weeks after a fall. He also had some general nervous symptoms, for which he was an in-patient at Guy's Hospital. The central scotomata, at first absolute for form, became, as recovery progressed, scotomata for colour only. Eventually perfect acuity of sight was attained, and the limits of the fields of vision became normal. The other nerve-symptoms also disappeared in the course of six months.

Mr. W. ADAMS FROST read a case of Sympathetic Ophthalmitis subsequent to the excision of the exciting eye. A man, aged twenty-five, was admitted into St. George's Hospital on November 3rd, 1883, for iritis of the right eye. There was no history of syphilis or rheumatism; and the patient traced the commencement of the affection to some hair entering the eye while he was clipping a horse a month before admission. There was conjunctival and ciliary injection, and on the inner side a few vessels encroached on the cornea. The lower half of the cornea was thickly studied with punctate opacities, and there were numerous posterior synechiæ. Tension was normal. A week later there was slight prominence of the ciliary region above, and an upward iridectomy was performed. The staphyloma increased in size, the eye became very painful, and the anterior chamber shallow. On Dec. 15th iridectomy downwards was attempted, but no iris was removed. The pain being severe, the eye was enucleated on Feb. 2nd, the left eye being then normal; but, five days later, slight conjunctival injection and punctate opacities on the cornea were noticed, but neither pain nor tenderness. Atropine, exclusion of light, and pilocarpine injections were used. On March 19th there was a single fine posterior synechia. The cornea was clear; V=¾. The globe of the excised eye was bisected, and one-half was mounted in glycerine jelly. The other half was examined microscopically by Mr. Jennings Milles (the microscopical sections were shown at the last meeting). He reported that the ciliary staphyloma was formed by a nodule consisting of inflammatory cells closely packed. The sclerotic over this was much thinned. The iris was firmly adherent to the lens, and its parenchyma infiltrated with small round cells. The choroid was thickened in its whole extent, especially in the region of the papilla.—Mr. NETTLESHIP said that Pagenstecher had described a tubercular nodule of the iris, which seemed to have been set up by hairs passing through the corneal tissue; he inquired whether any hairs had been found in Mr. Adams Frost's case. This question was answered in the negative.

Mr. JONATHAN HUTCHINSON read notes and showed photographs of a Remarkable Case of Proptosis. The patient was a Hindoo gentleman, who came to him for extreme proptosis of the left eye, having not long before lost his right eye from a similar affection. The eye was extremely protruded, and mostly downwards; the lower lid was everted. The movements of the eye were not much interfered with, but there was a good deal of chemosis. The edge of the lacrymal gland, which was greatly enlarged, was felt on a level with the upper margin of the orbit. The upper lid hung loosely, but the lids could not be closed. The face was puffy, especially in the parotid region, and under the jaw. The other eye had been attacked in a precisely similar manner about three years previously, and after varying for two years had finally become so prominent that a few months before he came under observation the lacrymal gland had been removed, as also a firm lobulated mass which occupied the upper and outer part of the orbit, and turned out, on microscopical examination, to be composed of fibro-adipose tissue; suppurative inflammation set in after this operation, and the eye was lost. Within a few days of this time the hitherto healthy eye became protruded, which naturally greatly alarmed the patient. As in the case of the other eye, there had been variations in the degree of proptosis, and looking to the ill effects of operative interference in the other eye, it was decided to try the local application of ice. This was sedulously applied to the eye, to the forehead, and to the nape of the neck for a week without intermission; the patient at the same time took small doses of iodide of potassium. At the end of this time there was a decided improvement; the ice was, however, continued, and later on mercury was given in combination with the iodide. The result was that the patient was practically cured, and had since remained well. In reference to the nature of the case, it was pointed out that the enlargement of the lacrymal gland could not be regarded as in any way causal; it was coincident, but nothing more. There must have been some swelling of the fibrous or fatty contents of the orbit which caused the protrusion; whatever it was, it was capable of spontaneous diminution, it was prone to relapse, and was, as well as the enlargement of the various glandular structures, under the influence of iodide of potassium. Malignant disease could be negatived from the fact that there had been no recurrence in the eye first affected. The disease was analogous, he believed, to a group that had been described by Brodie, and more recently Mr. Morrant Baker, where there was a tendency to the formation of ill-defined, but more or less lobulated masses of fibro-fatty tissue in the region of the neck, but in none of the cases that he had seen was there proptosis or enlargement of the lacrymal gland, though he had in one case found enlargement of the parotid gland in association with fatty masses in the neck. Though the condition was remarkably local, it was not one of new growth, but rather of hypertrophic development, there being no tendency to general obesity. He suggested that one reason why glands of different function should be associated in the enlargement, was that the hypertrophy was due rather to increase of the connective tissue elements than of the gland structure itself. Exophthalmic goitre might possibly be a member of the same family, and he noted that some of the cases described by Mr. Morrant Baker were irritable even to the verge of insanity. In conclusion, he pointed out that these fatty outgrowths underwent great changes in connexion with the state of health of the patient, and that much benefit was often derived from a change of air.—Dr. STEPHEN MACKENZIE spoke of the relationship of the case to Graves' disease, in which the antecedent vascular disturbance was noteworthy, as was also palpitation and altered cardiac rhythm. In Graves' disease he had frequently found that the continuous application of cold to the neck was followed by great improvement. He asked whether there was any enlargement of the thyroid gland.—Mr. GEORGE WALKER spoke of the case of a woman with marked proptosis, in which compression of the carotid artery in the neck stopped the pulse in the arteria centralis retinæ. He concluded that aneurysmal dilatation of the artery in the cavernous sinus existed and led to venous engorgement of the orbit. He also said that the dilated "lymph vessels" on either side of the vessels could be seen. In reply to Dr. Brailey, he said the existence of a semi-translucent border was inferred to be dilated lymphatics.—Mr. EALES related the case of a man, aged forty, a glass-blower, of intemperate habits. The onset was by an acute attack of headache, associated with protrusion of both eyeballs. In this case there was also perceptible enlargement of the lacrymal glands; the left cheek was scorched, and the left eye most protruded. In glass-blowers and the like a hyperæmic optic disc was common.—Mr. JESSOP asked whether iodide of potassium diminished the size of the fibro-fatty growths.—Mr. BROCKMAN, of Madras, said that in India some cases of elephantiasis, which was common amongst Eurasians, might be associated with proptosis, and considerable improvement was effected by iodide of potassium and mercury. As a syphilitic taint was also present in many cases of elephantiasis, he could not say whether remedies acted against the elephantoid or the syphilitic element.—Mr. HUTCHINSON, in reply, urged that nationality had probably nothing to do with the disease, since it excited as much attention in India as at home. With regard to the fibro-fatty growths, he did not know whether iodide of potassium was of benefit or not, but change of air and abstinence certainly were. The dilatation of orbital veins spoken of by Mr. Walker was not mechanical in Mr. Hutchinson's opinion. No one would deny the existence of the vascular element in Graves' disease, and the want of power to control the temper with great excitability as met with in cases of the "Morrant Baker"

type, showed that there were remote features of family likeness amongst all the conditions of which mention had been made. In his case no enlargement of the thyroid gland existed, and the patient was not in the least excitable. It would be very interesting to come across cases of gland hypertrophy associated with fat hypertrophy, but such cases had not been observed by Mr. Morrant Baker. With regard to the iodide of potassium, this never exceeded fifteen-grain doses three times a day, and began with only three grains. Ice was the means of cure without doubt in the worst stage of the case, but later on, perhaps, the mercury acted in conjunction with the iodide.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Sub-section of Public Health on April 10th, Dr. CAMERON read a paper on Antiseptic Experiments in the Vaults of St. Michael's Church, Dublin, celebrated for their antiseptic properties. Bodies dry up in a desiccated mass, rather than decompose, when deposited in these vaults. The author placed an infusion of melon in Tyndall's tubes, and having submitted both to a high and prolonged temperature so as to sterilise the liquid, he placed a number of them in a vault of the church which seemed to possess the greatest antiseptic properties. The tubes were deposited with great caution, and in such a way as to occasion the least possible disturbance of the atmosphere. The extremities of the tubes were broken by means of hot forceps, and the vault was kept locked up for six weeks. They were then removed from the vaults. Seven of the tubes presented no change, but in the remaining five there was great turbidity owing to the development of mycelium, &c. In the case of the liquid kept in the unbroken tubes at the laboratory of the Royal College of Surgeons, no turbidity was noticed in their contents. On nipping the ends of the tubes of those kept in the laboratory and the sound ones brought from the mortuary vaults, turbidity set in in less than forty-eight hours. The author did not venture to draw any positive conclusion from these experiments, but their results seemed to show that the preservation of the liquid was due to the great freedom from dust which he noticed in the vault. Franklin had found that in the higher Alps organic infusions remained for a long time freely exposed to the air without undergoing decomposition, a fact attributed to the freedom of the air at great altitudes from dust, which of course included germs of various kinds.—Dr. MORE MADDEN referred to the famous vaults near Palermo, where two miles of galleries were lined with the dead bodies of monks. The sides of the galleries and the dead bodies, which were in a state of desiccation, were coated with dust. Of the character of the dust he knew nothing, but the antiseptic properties of the galleries were ascribed to the peculiar dryness of the air, and also to the nature of the soil in which the galleries were excavated.—Several members having made some brief remarks, the PRESIDENT expressed the hope that Dr. Cameron would continue his experiments.

Dr. T. MORE MADDEN, having recently read a paper in another section of the Academy on certain Mental and Nervous Disorders, called attention to other aspects of the subject, offering further evidence of the general prevalence and increase of insanity in all classes, and more especially amongst women, in whom it is frequently traceable to cerebro-nervous disorders originating in reflex irritation from utero-ovarian causes. There were also general moral and social causes. The facility with which any person could be legally confined as a lunatic was indefensible, seeing that any two of the most inexperienced of the 24,000 practitioners on the Medical Register could virtually consign any man or woman to a lunatic asylum. That this power was liable to abuse, he illustrated by cases in his own experience. He therefore suggested that the power of signing certificates should be restricted to certain officially appointed medical inspectors of lunatics, and that in the case of alleged female lunatics one of the inspectors should be a physician with some experience of the special functional disorders, the reflex consequences of which may either simulate or eventuate in insanity. The Lunacy Laws differed in England, Scotland, and Ireland; and the pauper lunatic asylums in England and Wales involved an expenditure of upwards of £1,000,000, while those in Ireland cost £200,000, according to last year's accounts. The reform of abuses and the improvement of curative treatment could be attained with diminished cost to the public. Let all the lunatic asylums become public property, and, placed under one central official administration in each country. The compensation of proprietors of private asylums would not be a serious consideration, considering the profits that would arise from continuing those institutions as first and second-class State asylums, and ultimately these profits would relieve the cost of the general public lunacy system. He suggested the abolition of the office of resident medical superintendent of public asylums, whose functions he would transfer to lay governors or masters, leaving the resident physician free to devote himself entirely to strictly professional functions, in which he would be assisted by a staff of extern or visiting medical officers. A large number of the chronic and harmless patients of the weak-minded or semi-imbecile class would be cared for with greater comfort to themselves and less cost to the public outside the walls of lunatic asylums. As an amendment of the laws relating to so-called criminal lunacy, he suggested the adoption of a law similar to the 64th Article of the French Penal Code, and the appointment of medical assessors in all trials in which the plea of insanity was advanced.—Dr. NEVILLE took considerable interest in lunacy since his first professional appointment as locum tenens in one of the large county asylums. The effect the diseases of the female genital organs might have in the causation of mental trouble was apt to be exaggerated by gynæcological specialists, and the question of lunacy was sometimes looked at through gynæcological spectacles. Where it was a case of one specialist attacking another he discounted a good deal of the criticism. He knew some of the gentlemen who gave attention to diseases of the mind to have studied the diseases as earnestly as specialists did in any other branch of medicine or surgery. The great trouble taken both in public and private asylums could not be excelled by any specialist. As to the increase in lunacy, it should be remembered that the causes of lunacy had greatly increased—e.g., the wear and tear of modern life. On the other hand, the struggle for existence made it the more necessary to get rid of the drones of society; and certainly lunatics, being of no use to themselves or their families, were drones in society, and their families would be anxious to put them under restraint. Nowadays medical education had advanced, and with it the diagnosis of insanity. Specialists in diseases of the mind would say there had been just as much improvement in the treatment of insanity as in obstetrics. Indeed, he saw a complaint made in connexion with the meeting of the British Medical Association in Bedford that there had been no advance made in obstetrics for several years. But he did not admit the truth of either allegation. On the contrary, he believed there had been an advance.—Dr. HENRY KENNEDY said he did not see why private asylums should not be continued. That abuses might exist would be allowed, but there were competent inspectors to visit private asylums and investigate their management. As to treatment, cod-liver oil had been found almost a specific where there was a tendency to insanity, indicated by such symptoms as restlessness and refusal of food on the part of persons advanced in life. In all those cases death almost invariably ensued from tubercular phthisis. Dr. More Madden was in some respects right regarding the stress he laid on uterine irritation.—Dr. MORE MADDEN thanked the Sub-section for the reception of his paper.

Reviews and Notices of Books.

Handbook of Geographical and Historical Pathology. By Dr. AUGUST HIRSCH, Professor of Medicine in the University of Berlin. Vol. I.: Acute Infective Diseases. Translated from the Second German Edition by CHARLES CREIGHTON, M.D. London: New Sydenham Society. 1883.

THE members of the New Sydenham Society should be grateful to their Council for wisely selecting so world-famous a treatise as this of Professor Hirsch to be added to their series, and for securing the services of one so competent to translate the work as Dr. Creighton; for the book is indeed a marvel of industry and erudition, and one which ought to be consulted by every writer on medicine. It is more

than twenty years since the author published the first edition, and he is now engaged upon the second, the first of the three volumes of which is here translated. In the long interval of time between these two editions there has been a remarkable development in literature and in the interest taken in epidemiology, which Professor Hirsch has himself done so much to further. It is gratifying to find him testifying to the value of the results effected in this direction by the publications of our own Health Department and the Epidemiological Society. In speaking of this growth of the subject matter of his work, he may well say that "some attempt to treat of Geographical and Historical Pathology anew was not merely justified, but even called for"; and in devoting himself to the task, we can well understand how "it has involved an entirely new treatment of the subject." To be sure, in these days the historico-geographical method is giving place to a mode of inquiry that goes to the root of etiology—we mean the search into the nature and properties of the virus of specific diseases, which now engages so much attention. But although this experimental method may have taught us much concerning the essential nature of disease and its propagation, it cannot replace the work done on the older plan, the comprehensiveness of which has thrown so vivid a light on the manner of diffusion of epidemic disease on a large scale.

The volume before us treats of the Acute Infective Diseases—viz., Influenza, Dengue, Sweating Sickness and Miliary Fever, Small-pox, Measles, Scarlet Fever, Yellow Fever, Asiatic Cholera, Plague, Typhus, Relapsing Fever and Bilious Typhoid, and Typhoid Fever; and concerning some of these we may advert to a few of the more notable facts presented. As examples of the exhaustive character of the work, it may be noted that the chapter on influenza contains references to the literature of epidemics dating from 1173 to 1878, and that the bibliographical references to the article on malarial fevers fill fifteen closely printed pages.

Influenza is eminently an epidemic disease—sometimes, as in 1857–58 and 1874–75, assuming pandemic proportions and spreading over a great part of the civilised world. Professor Hirsch finds no proof for the assertion that the epidemics are subject to periodical recurrence, or that they habitually travel from east to west, as many have held. He points out also how variable influenza is in the manner of its spread, in some epidemics large tracts of country being smitten almost simultaneously, in others the disease spreading but slowly. Having a geographical distribution over all parts of the globe, influenza appears to be uninfluenced by telluric conditions, by season, or by weather, and is thereby very different from epidemic bronchial catarrh. Although undoubtedly due to a specific virus, the disease is not transmitted by aerial infection, for it often spreads in directions opposite to that of the wind currents. It is interesting to learn that so long ago as 1836–37 this disease formed the subject of a "collective inquiry" by the Provincial Medical Association, the question being whether influenza were contagious or not. The replies were almost wholly in the negative. Few of the present members of the Association, which now exists under a wider name and with a much larger roll of members, can be aware that nearly fifty years ago the scheme, which is now being more ambitiously fostered, had its prototype in this inquiry.

From the widely prevalent and long-known influenza the author passes to the comparatively modern disease Dengue—a malady of the tropics, characterised by articular pain and swelling, fever, and cutaneous eruption; and although of brief duration, succeeded by marked debility and anæmia, very rarely leading to a fatal issue. In its sudden outbreaks over large districts it resembles influenza.

Next follows a chapter on the English Sweating Sickness, which carries us back to the battle of Bosworth Field, and with which Professor Hirsch inclines to believe must be allied the miliary fever recorded in many epidemics, especially in France, but also in Italy and Germany, up to the present day.

The chapter on Small-pox is one which will repay the most careful study. Its records reach back to the time of Rhazes in the tenth century, but so common a scourge was it that it would almost seem as if in pre-Jennerian times epidemics were considered too frequent to be noticed; at any rate, literature is not so full of them as might be expected. Very interesting is the evidence which goes to show that the starting-point of the disease was in India and Central Africa, and the manner in which with advancing "civilisation" it has been carried to islands and colonial dependencies. It did not reach Australia until 1838, and it has never yet appeared in Tasmania and New Zealand; and America owes its introduction to the European invasion. It appears to be especially prevalent in Peru, "notwithstanding," says Professor Hirsch, "that the natives appear to have been acquainted with the protective power of vaccine long before the advent of Jenner." Upon the value of vaccination, and the need for its thorough enforcement, Professor Hirsch speaks in no measured terms; and the testimony of one who has made himself so familiar with the ravages of the disease in times before this beneficent discovery was given to the world is not to be despised. He disbelieves in the notion of epidemic periodicity, the only factors necessary for an outbreak being in his opinion individual susceptibility and the introduction of the virus.

Measles appears to be very widely distributed; but Scarlet Fever, common in Europe, is rare in Africa and Asia, and is less frequently met with in epidemics than measles. Measles, again, prevails most in cold seasons; scarlet fever appears to be uninfluenced by climate, or season, or weather. The varying intensity in type of measles epidemics is, he thinks, largely due to the care, or rather the neglect, of the sick; but scarlet fever presents in itself various phases of malignity, increased, it may be, by insanitary surroundings.

The chapters on Malarial Diseases and Yellow Fever, diseases especially suitable for study from the geographical standpoint, are full of detail; but we must pass them by with the remark that Professor Hirsch notes that some forms of malarial disease seem to have disappeared, and that other new types, including "typho-malarial fever," first brought to notice in the American civil war, have made their appearance.

Asiatic Cholera is the next subject treated of, and a succinct account is given of the four great epidemics: that of 1817 to 1823, which reached the borders of Europe, but did not pass beyond them; that of 1836–37, which traversed the countries of Northern Europe, Denmark excepted, and was conveyed across the Atlantic from Ireland to Canada and the United States, thence spreading to Central America and across the Andes to the Pacific, whilst it also spread from North to South Europe; that of 1846 to 1863, which pursued much the same course and was marked by a remission in 1850–52; and that of 1865–75, in which also a remission occurred in 1869–70. There are regions left which cholera has never visited—as Australia, the Pacific islands portions of the East and West Coasts of Africa, Central and Southern Africa, as well as parts of South and North America; in Europe, "Iceland, the Faroë Islands, the Hebrides, the Shetland and Orkney Isles, Lapland, and the Russian territory north of the sixty-fourth parallel"; and in Asia, Siberia and Kamtschatka. But here and there, in countries which have been the seat of the disease, some regions have escaped wholly or partially—as in Switzerland, Baden, Wur-

temberg, some mountainous districts in the south-east of France, north of Scotland, and parts of Greece. The mode of spread, the tendency to follow the course of rivers, the relation of epidemics to the level of, or rather to the admixture of air with, the subsoil water, the nature of the cholera virus, and the indecisive results of experimental research (of course Koch's recent work is not included, for this volume was published in 1881), and the non-contagiousness of the disease, are amongst the many points treated of.

Next follows a full account of the Plague, which has appeared in all parts of Europe at different times, but has never extended in Africa beyond the northern countries; whilst Asia, Syria, Asia Minor, Armenia, Persia, and India have been the seats of epidemics in the present century. Climatic influences, and especially a low temperature, are favouring causes, but not to the extent formerly accepted; indeed, extremes of heat and cold appear mostly to "cause the extinction of the epidemic, or are little favourable to its breaking out."

The history of epidemics of Typhus, with the overwhelming evidence of their association with insanitary conditions, overcrowding, and famine; the association of similar conditions in the case of Relapsing Fever, and the highly contagious character of both these diseases; and the final chapter on Typhoid Fever—afford much room for comment did space permit. No summary will, however, suffice to indicate the wealth of material so laboriously collected and so skilfully arranged, and our readers must turn to the volume itself, which will well repay perusal.

Dr. Creighton has performed his part of the task in a highly commendable manner; and he has added to the obligations of English readers by compiling an excellent index to the volume.

The Evolution of Morbid Germs. By KENNETH W. MILLICAN, B.A., M.R.C.S. London: H. K. Lewis. 1883.

THIS essay, a contribution, as the title-page informs us, to transcendental pathology, comes opportunely to remind us of the bearings of modern research upon the nature of disease. For although the notion that one so-called specific disease may, under certain conditions, be transmuted into another is not wholly novel, yet it must be confessed that the tendency of pathological discovery to resolve such diseases into the effects of the action on the body of various parasitic microphytes has given fresh impulse to such speculations. Grant the existence of specific organic germs, and there is no escape from the application to them of the doctrine of evolution—the truth of which must rest upon the universality of its operation. It is to Mr. Millican's credit that he has applied the evolution hypothesis to the elucidation of certain unexplained facts of disease in a way that has not heretofore been attempted, and with a boldness which can only be admired. It may be true—there is certainly no *a priori* objection to the hypothesis—that many, if not all, diseases which have an origin external to the human organism have primarily sprung from some common ancestral type, and consequently that variations and resemblances are due to reversions or other modifications similar in kind to those seen in the animal world. It may be doubted whether such aberrations from the prevailing order are at all frequent, or that a really marked example of one specific disease could give rise to another of wholly different type. The existence of such hybrids as "rötheln," or of such gradual modifications in type as can be seen between tonsillitis and diphtheria, is suggestive of the truth which probably underlies Mr. Millican's contention. To establish it as true will require the accumulation of a large number of facts, and the work is one which we hope the author may be able to pursue

ST. THOMAS'S HOSPITAL MEDICAL COLLEGE

THE Archbishop of Canterbury presided at the distribution of prizes on Wednesday, July 9th. The following is a list of successful candidates:—

Summer Session.—First Year's Students—College prize £15 and certificate of honour: H. J. Smyth. College prize £10 and certificate of honour: S. B. Cook. Certificates of honour: H. J. Macevoy, S. W. Wheaton, H. A. Sansom. Second Year's Students—College prize £15 and certificate of honour: E. S. Gooddy. College prize £10 and certificate of honour: A. E. Godfrey. Certificate of honour: K. Totsuka. Third Year's Students—College prize £15 and certificate of honour: H. W. G. Mackenzie. College prize £10 and certificate of honour: R. T. Cann. Certificates of honour: J. R. Staddon, E. D. Ritchie, R. Lawson, F. C. H. Piggott, G. F. C. Williams.

Winter Session.—Entrance Science Scholarship—Scholarship £100 and certificate of honour: C. W. Cooke. Scholarship £60 and certificate of honour: F. Fawssett. First Year's Students—The Wm. Tite Scholarship £30 and certificate of honour: F. Fawssett. College prize £20 and certificate of honour: E. Webster. College prize £10 and certificate of honour: H. H. Heffernan. Certificates of honour: C. H. Eccles, R. V. Solly, W. W. Ord, C. W. Cooke. Second Year's Students—The Peacock Scholarship 40 guineas and certificate of honour: H. P. Hawkins. College prize £20 and certificate of honour: H. J. Smyth. College prize £10 and certificate of honour: E. Solly. Certificates of honour: H. Duncan, E. C. Stabb, E. H. Wright, S. W. Wheaton, S. B. Cook, J. H. Tonking, H. P. Helsham, T. E. Stuart, W. F. Brook, L. A. Bidwell, H. A. Sansom, J. T. Calvert, C. T. Quiller. Third Year's Students—Second tenure of half the Musgrove Scholarship 20 guineas, with College prize £20 and certificate of honour: S. H. Jones. College prize £15 and certificate of honour: A. E. Godfrey. College prize £10 and certificate of honour, with second tenure of half the Musgrove Scholarship 20 guineas: K. Totsuka. Certificates of honour: J. S. Hutton, H. C. Kidd, A. A. Brockat, F. D. Crowdy. Anatomical Assistants—Certificates of honour: A. E. Godfrey, G. A. Macdonald, F. G. Parsons, K. Totsuka. Prosectors—Prizes and certificates of honour: H. Duncan, E. C. Stabb. Certificates of honour: L. A. Bidwell, A. B. Brockway, W. F. Brook, H. P. Hawkins. Resident Accoucheurs—Certificates of honour: F. F. Caiger, W. Fell, W. J. Sheppard, W. Wansbrough Jones. House-Surgeons and Assistant House-Surgeons—Certificates of honour: W. Wansbrough Jones, G. F. Cooper, F. F. Caiger, G. D. Johnston, W. J. Sheppard. House-Physicians and Assistant House-Physicians—Certificates of honour: A. Foxwell, H. Milton, C. D. Green, W. Hull, W. J. Sheppard, J. Orford, F. F. Caiger, W. B. Tomson. Solly medal and prize: J. Pietersen. Surgery and Surgical Anatomy—The Cheselden medal, founded by the late George Vaughan, Esq.: R. Lawson. Special mention and certificate of honour: R. Lake. Practical Medicine—The Mead medal, founded by Mr. and Mrs. Newman Smith: H. W. G. Mackenzie. Special mention and certificate of honour: H. Bidwell. For General Proficiency and Good Conduct—The Treasurer's gold medal: R. Lawson.

THE SUPERANNUATION QUESTION: A SAD CASE.

To the Editor of THE LANCET.

SIR,—There is now living in the village of Eastmeon, Petersfield Union, Hants, an ex-Poor-law medical officer by the name of George Pink, aged ninety years. He held the position of district medical officer in the Petersfield Union for more than forty years, and on his resignation, when upwards of eighty, applied for superannuation allowance, which was refused. I learn that he is now nearly penniless, and that if help be not afforded him he must go into the workhouse. I shall be pleased to receive any subscriptions that may be sent me in aid of this poor man, who under no circumstances can be a burden to anyone very much longer.

I am, Sir, yours obediently,

33, Soho-square, July 6th, 1884. JOSEPH ROGERS.

THE LANCET.

LONDON: SATURDAY, JULY 12, 1884.

THE election of Mr. COOPER FORSTER to the Presidency of the Royal College of Surgeons of England is not altogether of good omen, not because it fails to place at the head of the College an eminent surgeon, but because it perpetuates the evil and useless tradition of always electing the senior vice-president to the presidential chair. It further indicates that the Council still hesitates to bring the acts of the executive as far as practicable into harmony with the wishes of the whole of the body corporate. It will be remembered that one of the recommendations adopted at the general meeting of the Fellows and Members held at the College last March was to the effect that the President should be elected by the Fellows generally, and not exclusively by the Council as heretofore. It was argued that if it had been found necessary to have ordinary members of the Council elected by the Fellows, then *a fortiori* should the President be elected by the Fellows. The custom of always electing the senior Vice-President to the Presidency has, no doubt, often been attended by unexceptionable results, and has secured to the office many men distinguished not only as surgeons, but as administrators and medical politicians. On the other hand, it is notorious that adherence to this custom has, not unseldom, placed at the nominal head of the surgical profession of England some who were neither eminent as surgeons nor competent as administrators. Indeed, the accidental, uncertain, and indiscriminating character of the old plan of electing the President constituted its most conspicuous fault. Its other principal defect was that it excluded the specially ordained electoral body—namely, the Fellows—from participating in the particular election which most intimately concerns the dignity and prestige of the College. The antiquated system received its death-blow at the general meeting already referred to, and its doom has been definitely pronounced by the Association of Fellows, as well as by that of Members. The Council has, however, not the heart to give it the *coup de grâce*.

A fortnight ago such a resolute and decisive step would not have been expected. A majority of the Council as then constituted expressed its satisfaction with matters as they stood, and did not wish any alteration. A week might have effected more change. On the 3rd instant five members were elected into the Council, all of whom were more or less explicitly pledged to a programme of reform. It would have been an auspicious result of the first meeting if a departure had been taken from a mode of electing the President which has been condemned by many members of the Council and by the Associations of Fellows and of Members.

But events took their ordinary course last Thursday, and Mr. COOPER FORSTER, as senior Vice-President, was elected to the Presidency; and it cannot be denied that so far as his talents and services to the College are concerned, this gentleman is as well qualified to discharge the duties of President as some of those to whom these duties have previously been entrusted. But many circumstances had conspired to suggest and justify a new departure. Exceptional circumstances call for exceptional measures. Impending legislation may affect the relations of the College, and it is desirable that the President at this time should be one who is not only acquainted with the affairs of the College, but who has a very strong hold upon the confidence and respect of the whole profession. The relations between the Council on the one hand and the Fellows and Members on the other are at present strained, and a wise and judicious man is needed at the head of the College to effect that compromise which can alone conciliate the disaffected at the same time that it perpetuates what is best in the traditions of the Council. A President who believes that the Council in all its dealings and relations is absolutely perfect, and who thinks that it is impossible to touch it without spoiling it, or an easy or indifferent President, who would be willing to perform his functions by deputy, might at this conjuncture curtail the influence and usefulness of the College, and even jeopardise its permanence. But, besides these weightier and more external considerations, there is a matter of domestic interest to be taken into account. On the 14th of next February the Hunterian Oration will be delivered. On the evening of that day the Council will entertain some of the most distinguished representatives of divinity, literature, art, and science, and it is desirable that the President of the College on such an occasion should exhibit the qualities of geniality, urbanity, grace, and culture. Without questioning the possession of these qualities by Mr. COOPER FORSTER, it cannot be gainsaid that no man in the profession is so richly endowed with these gifts as Sir JAMES PAGET. Consequently, we cannot avoid the conclusion that the election of Sir JAMES to the office of President for the ensuing year would have proved as popular as it would have been opportune.

KNOWING the sincere desire the Government entertain to pass their Medical Act Amendment Bill, and remembering how they have lost no opportunity of pressing it on, we write in the strong hope that it may be decided not to sacrifice a measure already so far advanced. Until Mr. GLADSTONE has uttered his fiat, however, we can write only on supposition. From the number and character of the amendments proposed there can be no doubt that in its progress through Committee of the House of Commons the Bill will be imperilled; and we must confess to entertaining grave anxiety as to the form in which it will be finally passed by the Legislature. Our readers will remember that although in the debate on the second reading of the Bill in the House of Commons there was a general consensus of opinion as to the necessity of the measure, and also as to the wisdom of its main provisions, there were yet numerous indications that many who supported the second reading only did so with the intention of introducing amendments in Committee. Of these the most important is that standing in the name of Sir LYON PLAYFAIR, which is as follows:—"The Medical Board in any part of the United Kingdom, with the approval of the Medical Council and the consent of the Privy Council, shall, in substitution for any final examination held in pursuance of a scheme or schemes under this section, accept the final examination in Medicine,

Surgery, and Midwifery, of any of the bodies hereafter in this section mentioned returning a member or members to the Medical Board—that is to say, of (1) any university; or (2) any combination of two or more medical corporations who may agree on a joint examination; or (3) any combination of a university with a university or universities, or of a university or universities with a medical corporation or corporations; provided (*a*) that the Medical Council shall be satisfied that any such substituted examination is equivalent in efficiency to the examination for which it is substituted; and (*b*) that in every substituted examination such number of examiners, not exceeding half the total number of examiners, as may be determined by the Medical Board, with the approval of the Medical Council and the consent of the Privy Council, shall be appointed by the Medical Board." If this amendment is introduced, the principle of a "one-portal" examination will be sacrificed, and those who have been hoping that at last an end was to be put to a system which is a disgrace to the profession and an injury to the public will be grievously disappointed. We may be sure that the corporations would at once enter into the necessary combinations, and that we should never see any independent and really trustworthy examination conducted by the Medical Boards. We have heard three arguments advanced in support of the amendment: that it is a hardship to compel medical students who have passed higher medical examinations to pass the easier one of the Medical Boards; that the expense of the two examinations will deter students from passing the voluntary higher examination; and that the double clinical examination will be too severe a strain upon the patients in the hospitals. How amused students must be when they hear such arguments advanced on their behalf! How can it possibly be a hardship upon a man who can pass a high examination to make him pass one of a lower standard in the same subjects! It could only be so if the higher were higher in name and not in essence—if it were concerned with the minutiæ and details while the great fundamental principles are neglected. We should be glad indeed if the argument of expense might be taken as showing that the corporations had any real regard for the student's pocket; but with the fact fresh in our recollection that the Royal Colleges of Physicians and Surgeons in London have entered into a scheme by which a diploma will only be given by either to those who have passed the examinations of both bodies, and who have paid the full fee now charged for each single diploma, we must refuse to regard this as anything more worthy than a pretext. All who are practically acquainted with the matter know full well that the clinical material available in London, Edinburgh, Dublin, and the other large towns where these examinations would be held, is abundantly sufficient, and that the double examination need not, and would not, inflict any injury, or even inconvenience, upon the patients in hospitals; this is but a false cry raised to win the support of those who, without personal and practical knowledge of the question, may be led astray by appeals to economy, or to their sympathy with suffering. But it may be urged, Are not the safeguards introduced into the amendment sufficient to ensure that this portal to the profession shall be satisfactorily guarded? We must answer with an emphatic "No." The universities and combined corporations would still be left free to compete to admit students to the Register, and all experience shows that where the spirit of competition can be allowed any scope in such a matter, it always tends in one direction only. So long as a student has a choice of several examinations before him, those who profit by his choice will be very sure to devise means of attracting him, and our past and present experience shows abundantly what these means are. The principle of the proposal is wrong; it perpetuates the very evil the whole Bill is intended to put an end to, and we doubt whether by any means it could be freed from ill results. It is impossible, too, to forget that this amendment is introduced in the interest of some of the existing examining bodies, and we may therefore be assured that they are fully alive to the ways in which they can turn it to their own advantage.

We trust that the Government may yet see their way to introduce a clause conferring a title upon all holders of the diploma granted by the Medical Boards. This is a matter to which we have repeatedly referred; the students, who of all people are perhaps most interested in it, have expressed their opinion in no uncertain way; it will injure no one, and it will make the necessary registrable qualification of real value to the holders of it. Without a title the holder of the diploma will labour under a serious disability, and two results may with certainty be anticipated—a renewal of agitation for fresh legislation on this point, and the use by the less scrupulous men of titles to which the examination they have passed gives them no claim. The Government should boldly grapple with the question, and we are confident that if they will fairly look into it they will see the justice and the necessity for granting some title with the registrable qualification, and we trust that at the same time they will reintroduce the clause referring to "higher titles" which was in the Bill as originally introduced in the House of Lords last year. They will thus close this question finally, and will earn the lasting gratitude of the profession.

PUBLIC opinion means well; but it is much mistaken in its policy in relation to baby-farming. A strong prejudice exists against the provision of any systematic help for the parents of children who are a burden either because they are illegitimate or because their mothers have to fulfil daily tasks of labour. It is easy to understand, and everyone must, as society is at present constituted, sympathise with, the anxiety to avoid offering "facilities"—such as are rightly or wrongly supposed to be offered in countries where foundling hospitals abound—for the rearing of children who are, so far as natural maternal care is concerned, abandoned. It is with difficulty that we maintain a single "Foundling Hospital" in London, and if the management of that solitary institution were not in trusted hands and known to stand on the highest moral ground, it would fail to secure even the very scanty consideration now bestowed upon it. A proposal to multiply foundling hospitals in this metropolis would be scouted as inadmissible on the score of moral policy. We do not, it must be confessed, share the fear of encouraging reckless living by the establishment of houses of succour for infants, though we comprehend and respect the feeling that begets that fear in other minds; but

we do stand in exceeding alarm at the indefinite perpetuation and extension of the evils that result from the refusal of the State to step in and provide the hospitals required. Whether we will or will not, there *must* be places and means of "taking charge" of children of tender age. Mothers *will* put their infants out to nurse, and if measures are not taken to provide places of safety for their reception, where the treatment they receive is under proper supervision, they will languish and die, in some instances, doubtless, to the grief, in others to the satisfaction, of their parents. Much misapprehension seems to prevail with regard to the significance of a full payment per week for the care of a young child. There is a disposition to accept the fact as evidence of good faith. We regret to feel compelled to look at the matter from another point of view. When a servant girl pays six shillings a week for the care of her infant, we fear it is generally understood—though not, perhaps, expressed in the agreement—that the number of weeks during which this heavy tax must be borne will not be many. The very liberality of the allowance shows that it is not meant to last. This is a point on which the Courts, as well as public opinion, probably stand in need of a little common-sense enlightenment. We only mention this as one of the facts about baby-farming which need to be scrutinised somewhat more closely than it is the wont to look into them.

It would be useless to license the keepers of baby-farms or to register these institutions unless they are to be properly inspected; and as secrecy in respect to the whole business is one of the first conditions on which parents insist, it is impossible, out of Utopia, to expect baby-farms to be conducted as private ventures without being misconducted. Sooner or later the State will have to make the provision required. Meanwhile, what is to be done? We have for many years past repeatedly pressed this matter on the attention of our readers, and, through them, on public opinion. It is a question of great importance. We have urged, and we again contend, that it should be made a misdemeanor to undertake the care of any child—not being the guardian's own child—whether for "gain" or for "love," without reporting the fact to the police. Even with this enactment there will be many cases of malpractice. Children will be represented as being the offspring of their custodians when they are in fact farmed; but a little vigilance on the part of the police will go far to render this form of imposture difficult. There might be a heavy penalty for misrepresentation. There should be no hardship in requiring those who take children in to nurse, on any terms, to notify the fact at the district police station. It would not be necessary or politic to require that they should give up the names of the persons by whom they were entrusted. This might be left a secret. No statesman would desire to throw needless obstacles in the way of the placing out of children to nurse. If it were not permissible to do this, and with a fair amount of ease, and perfect secrecy as regards the names of the parents, there would be a notable increase in the crime of infanticide. This must be distinctly borne in mind and provided against, or legislation, even on moral grounds, will be worse than useless. Again, the reception of children to nurse must be followed by the appointment of local inspectors, who should be empowered to visit the homes of persons known to have such infants in charge at proper intervals, and who should be held accountable for the supervision of these little ones as regards health and general management. Medical officers of districts under the Poor-law division of the Local Government Board would be suitable persons to perform this service, and while they are going their rounds among the poor, visiting the permanent sick, lunatics, and idiots, it would be easy for them to do the additional duty for the recompense of a small fee. Medical men are, of course, far better judges of "health" and "condition" as regards young children than constables or relieving officers can possibly be, and there would not be the same objection to the visits of a medical practitioner as to those of a constable or even a relieving officer.

It is clearly time that something were done in this matter. It is one of great urgency and gravity. We venture to think that even at this late period of the session a short Bill might be passed containing the three provisions we have specified. First, that all persons having the care of children not their own should notify the fact to the local police, or it might be notified by any other person by letter, addressed to the head constable or superintendent; second, that it shall be a misdemeanor carrying a heavy penalty to fail to make this notification, or to make any misrepresentation as to the facts; third, that the medical officers of districts shall be empowered and required to visit all places where children are farmed at short intervals—say once a month,—and to see and report upon the health and condition of the children so farmed. If the Legislature is practical and sincere in the often expressed wish to pass some satisfactory measure on the subject, this brief outline may be useful as a basis, and no real difficulty would, we believe, be found in framing and passing such a measure.

THE firmness of the hold which bacteria, and all that relates to them, have taken on the mind of scientific investigators may be accurately measured by the number and length of the contributions to periodical medical literature. A grand discovery, like a huge wave, is invariably followed by a succession of smaller undulations of varying size, which are of value in their own way. If complete reliance may be placed on the conclusions of M. PASTEUR'S recent work on Rabies, we may indeed congratulate scientific vivisection on having achieved a position which not only conclusively establishes its *raison d'être*, but ought surely to silence the unreasonable demands of the anti-vivisection movement.

The first communication to which we draw attention is one by OSOL on the virus of charbon, a disease which, though perhaps almost worked out, still continues to attract a large share of attention. Under the guidance of Prof. SEMMER of Dorpat, OSOL has studied the influence which the injection of charbon blood, deprived of its spores and bacilli by boiling, has on the animal organism. Blood taken from large-sized animals dead of charbon was first diluted with equal parts of water, boiled in glass vessels, and filtered while hot. The residue of the filtration and the coagulum formed by boiling were again treated with water, and once more boiled and filtered. After this double filtration the liquid was heated on three consecutive days for a period of two hours each time. Large injections were then made on rabbits and mice, with

properly cleaned syringes. Other animals used as control subjects were inoculated with minute quantities of the charbon virus. Some sterilised broth was also inoculated with some of the reduced virus, kept in an incubating stove. Finally, the blood of the sheep and horse, taken from healthy animals, was subjected to the same manipulations as the charbon blood, and then injected in the same doses as the latter into mice and rabbits. Animals inoculated with the charbon virus previously boiled have perished in from three to six days. Their blood and glandular organs, examined immediately after death, contained in a quarter of the number of cases the bacilli characteristic of splenic fever. In those instances where bacilli were not detected, innumerable micrococci like those described by MM. SEMMER and BOLLINGER in 1872 were found. According to these observers, the rods and cocci represent two complementary morphological elements. M. OSOL never came across the protococci recently described by M. ARCHANGELSKI ("Contribution à l'Etude du Contage Charbonneux." Dorpat, 1884). Inoculations with the blood from animals dead of the induced disease on sterilised culture liquids led to the development of typical forms of bacillus anthracis. The same blood syringed under the skin of rabbits and mice led to the death of this second batch, bacilli being also discovered in the blood and viscera. The control animals experimented on with minute doses of the poison exhibited no pathological manifestations. The sterilised liquids remained perfectly clear, thus proving that the boiled virus contained no living organisms. From these investigations, M. OSOL concludes that there exists in the blood of animals affected with charbon a specific virus, soluble in water, but non-volatile and of a chemical nature. When this virus is inoculated on animals, it modifies their liquids in such a manner that *indifferent* micro-organisms contained in the normal tissues are transformed under the influence of the virus into charbon bacilli at the end of from three to six days. M. OSOL does not underrate the importance of the bacilli, which he regards as the only agents capable of producing the specific chemical poison.

M. ZAHN has made fresh researches on the blood of abbits, cats, sheep, and calves (VIRCHOW'S *Archiv*, p. 401, 1884), tending to prove that the blood of healthy animals does not contain the germs of putrefaction. He collected, with full precautions, small quantities of blood in tubes previously filled with hydrogen, oxygen, and carbonic acid, so as to exclude the atmospheric air. After weeks and months the contents of the hermetically sealed tubes, kept at a constant temperature of 37°–38° C., remained free from any sign of putrefaction.

M. HAUSER (*Centralblatt für die Med. Wissensch.*, No. 21, 1884) has searched for micro-organisms in living healthy tissues. Entire organs and parts of tissues, removed, by means of instruments previously heated, from animals just killed, were at once placed in super-heated glass vessels, the mouths of which were securely plugged with cotton-wool. These vessels were then kept in a moist chamber at a temperature of about 30° C. The conclusions arrived at by HAUSER were to the effect that micro-organisms do not exist in healthy tissues. The bearing of ZAHN'S and HAUSER'S experiments on those of M. OSOL are plain, since the last-named believes that healthy tissues do harbour germs.

BELTZOW (*Centralblatt für die Med. Wissensch.*, No. 21, 1884) has examined five cases of pyæmia and one of pyosepticæmia, with a view to clearing up the nature of the germs associated with these diseases. He has found that the organs of human subjects dead of pyæmia contain, besides colonies of cocci, a considerable number of bacilli which belong to two distinct morphological varieties. One of these has a distinct resemblance to the bacilli of malignant œdema, and the others have dimensions intermediate between the bacilli of tuberculosis and the bacilli of the septicæmia of mice. In one case only, by the side of the cocci and bacilli, in the liver, colonies of leptothrix buccalis were discovered blocking the capillaries of the gland.

BAUMGARTEN has given the following method for the pure cultivation of the bacilli of tubercle. A tubercular nodule rich in bacilli, removed with due antiseptic precautions from a living animal or human cadaver, is transplanted into the anterior chamber of a rabbit's eye; as is well known, under these circumstances no inflammation follows. The transplanted nodule perceptibly augments in volume, and is allowed to do so for from eight to fourteen days. Microscopical examination shows that the increase in size is due chiefly to the germination of bacilli, and, at the same time, that the histological elements have undergone corresponding atrophy. If portions of this premier nodule be inserted into the anterior chamber of the eye of another rabbit, and so on for a series of rabbits, a time comes when an absolute pure culture of tubercular bacilli is obtained. The successive inoculations required by this procedure set up specific inflammatory lesions of the eyes, followed by generalised tuberculosis.

FALK has observed that putrefaction destroys the virulence of the tubercular virus. He has endeavoured to obtain by experimental means a benign tuberculosis by inoculating virus attenuated by putrefaction, at the same time hoping to discover a means of "vaccinating" against tuberculosis. Inoculation on rabbits with putrefying tubercular lesions was followed by a local tubercular mischief only, which ended either by suppuration or calcification, no internal lesions being discovered. But it was found that animals thus experimented on derived no immunity from fresh inoculations made with pure tubercle; indeed, tuberculosis seemed to ensue more rapidly.

BAUMGARTEN has fed rabbits with milk in which tubercle bacilli had been held in suspension. After a single meal of from fifty to forty grammes of this milk, the rabbits presented, with a remarkable constancy, tubercular infiltrations of the mucous coat of the intestine, mesenteric glands, and liver. The more charged the milk was with bacilli, the more extensive were the resulting lesions. In some of these latter cases the vermiform appendix and large intestine were eaten through with caseous ulcers, on the edge of which tubercles with epithelioid cells stuffed with KOCH'S bacilli were to be found. At the surface of the tonsils there also existed, in some cases, ulcerated lesions infiltrated with bacilli. BAUMGARTEN believes that infection takes place at the upper end of the digestive tract. Of other organs in these instances the lungs only exhibited tubercular lesions. This observer has also remarked that putrefaction lessens the virulence of the tubercular material.

LAST week an interesting and instructive lecture was delivered at the United Service Institution by Lieut.-Colonel

TULLOCH, C.B., of the Welsh Regiment (formerly the 69th) on the subject of Soldiers' Food. After a brief introduction, pointing out the sins of omission and commission, which until a recent period contributed largely to the very high rate of mortality which prevailed in our army, the author proceeded to consider in detail the various articles constituting a soldier's diet, under the headings of ration meat, bread, and groceries, and pointed out how much might be done for the benefit of soldiers by a little more supervision on the part of commanding officers and captains of companies. He then discussed the nutritive value of different foods and the amount necessary to keep a soldier in a state of efficiency. From a comparison of the nutritive value of the rations of foreign armies with our own, it appears that the total amount of water-free food in the Russian Army is 34·30 oz.; in the Prussian, 24·80; in the French, 24·14; in the Austrian, 23·30; and in the English, 23·13; so that our army stands at the bottom of the list as far as the nutritive value of the diet is concerned. Colonel TULLOCH then proceeded to offer suggestions as to the best mode of improving the existing rations; the management of the regimental canteen; the establishment of a recreation-room bar; and the introduction of a little more civilisation into the arrangements for the soldiers' meals in the barrack-room. The subject of food on troop ships was next brought under review, and the extremely difficult question of food on active service. On the latter point the lecturer pointed out the great difference which is observed in different regiments employed on the same service. "Some regiments will manage to keep well and send few men to hospital, whilst others precisely similarly situated, who are not properly looked after, suffer greatly. Instead of using strong language about the commissariat, who are often struggling against difficulties of which few but the General Staff have any idea, officers might often manage so as to add to the soldiers' rations," and he gave some instances of how this might be, and had been, done. We think there cannot be a doubt that it would be most advantageous to add to the soldiers' food both in peace and in war, but the difficulty in the former consists in the large addition which it would make to the already heavy expense of our army; and in war, in obtaining supplies, and in providing and maintaining the great amount of transport necessary to keep up the commissariat with an army on the move. Lord WOLSELEY, in his "Soldiers' Pocket-Book," suggests the following as a liberal and varied war ration for British troops:—"Bread, 1½ lb.; fresh meat, 1½ lb.; peas or beans, 3 oz.; potatoes and green vegetables, 1 lb.; cheese, 2 oz.; sugar, 2 oz.; salt, ½ oz.; pepper, ⅛ oz.; ground coffee, 1 oz.; tea, ½ oz.; red wine, ½ pt.; or beer, 1 pt." On this recommendation Colonel TULLOCH justly remarked that "such feeding might be possible with a small force and a perfect system of transport; but a Commissary General who, anywhere but in India, could so supply a large army on the move would deserve a peerage." The paper was evidently carefully prepared, and was of an eminently practical character. The views of the author were well borne out in the discussion which followed, and especially by Dr. DE CHAUMONT, whose opinions on the necessity of feeding up our recruits and young soldiers met with general support. On one point only the paper seemed to be defective. The author made no reference to the hours at which soldiers have their food served out to them; and this is a matter in which a change is greatly needed. The long period of nineteen hours elapses between dinner and breakfast, the two principal meals of the day; and although it is true that the soldier has an evening meal provided, it is not of a very substantial character. It would, we think, be a great advantage if the hour for dinner were changed to four or five in the afternoon. We entertain a strong opinion that much of the drinking of our soldiers is due to a craving for something in the long interval, and that the thing most easily procured and most successful in allaying the feeling is found, or believed to be, some form of alcoholic stimulant. We trust that the subject of the soldiers' food may receive due consideration from the War Office authorities, and that steps may be taken to carry out the suggestions which Colonel TULLOCH has made with a view to an improvement in a matter having so important a bearing upon the health and efficiency of the army.

AT the annual meeting of the Royal Society for the Prevention of Cruelty to Animals, held on Monday last at St. James's Hall, Dr. RICHARDSON, F.R.S., had the satisfaction of reporting that one of the labours on which he has been engaged for a quarter of a century had been brought to a practical result of a most satisfactory kind to all friends of human progress. He observed, briefly, that he had been able to submit the inferior animals that have to be killed to a perfectly painless death under anæsthesia. In 1860 Dr. RICHARDSON proposed to the Society that such a plan should be instituted, and in 1871 he read a paper on the same subject to the Medical Society of London. The suggestion met with much favour, and the comments upon his paper in the scientific and other journals led to discussion of the project, and, in a small way, to its adoption in one or two foreign cities. Meantime the author himself continued his researches, and within the last few months, aided by a pecuniary grant to the committee of the Dog's Home, Battersea, from Mr. KENNETT, whose philanthropic benevolence is so well known, he has been able to carry out his design at the Home on a scale sufficiently large to prove its practical and extensive application. In describing this result, Dr. RICHARDSON first gave a short account of his early efforts to make use of electricity as a rapid means for the extinction of lower animal life, and explained the reasons why he had been forced to the conclusion that the electric shock, rapid as it is, cannot safely be entrusted to the hands of those who have to subject animals to death. He next described the various researches he had made with anæsthetics of various kinds—chloroform, nitrous oxide, ether, methylene, bisulphide of carbon, carbonic acid, carbonic oxide, coal gas, and coal gas combined with chloroform—by which agents death is produced through sleep. Into the lethal chamber which he had now set up for lost and starving dogs, from fifty to a hundred dogs, enclosed in a cage, could be wheeled at once, and submitted to the narcotic vapour, could be made to go into a sleep from which, without any awakening, they passed into death. Between four and five hundred dogs had already been destroyed by this painless process. The chief agent used for narcotising was

carbonic oxide, with which the chamber was fully charged before the animals were moved into it. The gas on its way into the chamber passed over a porous surface, from which it took up narcotic vapour containing chloroform, which, also diffused through the chamber, increased the lethal action and maintained the lethal atmosphere within the chamber after it was closed and when not in use.

On the question of the painlessness of the process, Dr. RICHARDSON said that we had the good fortune to be assured by the best of evidence on that matter. The animals were subjected to precisely the same ordeal as were the hundreds of human beings who each day were subjected to anæsthetic sleep from chloroform, laughing gas, methylene, or other narcotic gases or vapour. The animals felt nothing more than the higher animal experiences from narcotism, while they felt none of the reaction of recovery, which is the part mainly complained of by those who have been anæsthetised. In a word, by this process science had made death for the lower creation the truest euthanasia, in which a profound sleep, induced in a few minutes, terminated with equal facility in the sleep of dissolution.

Dr. RICHARDSON concluded by indicating that the same lethal process, carried short of death, might be applied to various animals the flesh of which is used for human food. He had narcotised fourteen sheep (animals which were very readily susceptible to the gas) so completely as to admit of their being killed quite painlessly in the ordinary way; and he fully expected that the Model Abattoir Society, over which he presided, would be able to adopt a system of this character, and to show the way in which it could be made largely applicable throughout the country. If it be sometimes urged against science that she, like nature, is cruel, it must also be admitted that she, like nature, is also kind. It may perhaps be said of her, "She must be cruel to be kind." In the discovery of anæsthesia and of various anæsthetics she may have inflicted some inconvenience, even actual pain, on a limited number of the inferior creation; but here is her return, even to inferior animals. She secures for them, in their want or decrepitude, a death better and easier than falls or ever can fall to the lot of the large majority of the family of man.

Annotations.

"Ne quid nimis."

THE COLLEGE ELECTION.

THE disappointment at the failure of Mr. Oliver Pemberton's candidature for a seat in the Council of the Royal College of Surgeons of England is not confined to the provincial Fellows. Indeed, there are reasons for believing that Mr. Pemberton met with a large measure of support from the metropolitan Fellows. In proof of this, it may be stated that he received only five votes less than a successful metropolitan candidate. The provincial Fellows may fairly complain that they are practically disfranchised; they can only vote at the expenditure of a costly journey to London. The remedy is, however, in their own hands. Let the provincial Fellows generally co-operate with the Association of Fellows, and thereby force the Council to obtain a new charter, allowing voting by voting-paper, before next July. A sub-committee of the Association is actively engaged in preparing a complete scheme of reform, which will soon be ready for presentation to the Fellows. Only by united action can those improvements and reforms be accomplished that will give the Fellows adequate representation on the Council and a corresponding increase of influence and power.

THE PATENT MEDICINES STAMP ACT.

THE repeal of the Patent Medicines Stamp Act is a subject which continues to excite a great deal of interest and much discussion. That such an Act should have been allowed to remain in force for so many years is an anomaly which is hardly conceivable, and is certainly not capable of rational explanation. It must be remembered that it was passed at a time of great financial difficulty, in an age when almost everything was taxed. "We must pay taxes," says Sydney Smith in describing the condition of his times, "upon every article which enters into the mouth, or covers the back, or is placed under the foot. Taxes upon everything which is pleasant to see, hear, feel, smell, and taste. Taxes upon warmth, light, and locomotion. Taxes upon everything upon earth and the waters under the earth. On everything that comes from abroad or is grown at home. Taxes on raw material. Taxes on every value that is added to it by the industry of man. Taxes on the sauce which pampers man's appetite, and the drug which restores him to health." Times have changed since then, and almost all of these obnoxious taxes have been repealed, but for some unaccountable reason the tax on medicines is still retained. It is a subject of congratulation to every right-thinking man that its days are now numbered, and that the Government have at last consented to take decided action in the matter. Reform, to be of avail, must be thorough and sweeping, and it has long been seen that nothing short of the total repeal of the Act will be of the least use. It is a curious fact that England, the land of the free, is the only country where the stamp duty is enforced. In no other country in the world would such an iniquitous law be tolerated even for a moment. In France and Germany there is no Patent Medicines Stamp Act; and even America, with her outrageous tariff system, does not levy a special tax on medicines destined for the relief of pain and the cure of the sick and suffering. Our Act even, curiously enough, applies only to England and Scotland, Ireland and the Channel Islands being happily exempt from its operation. We have already referred at some length in our last issue to the fallacious endorsement it affords to quack nostrums, but perhaps the worst and most obnoxious feature of this law is the facilities it affords for the sale of poisons. By simply affixing a patent medicine stamp, which means no more than a postage stamp does on a letter, any person, however ignorant or however unscrupulous, can sell any quantity of the most deadly poison without a word of warning as to its nature, and without the slightest indication that it is not a harmless or simple remedy. It is a well-known fact that many nostrums contain active poisons; one which is familiar, by name at all events, to everybody contains not only morphia and Indian hemp, but a large quantity of prussic acid. Others are known to have as their active ingredients opium, chloral, and even strychnia. For suicidal purposes certain patent medicines are admirably adapted, and the mortality from their use is enormous. Scarcely a day passes without the record in the papers of an inquest on some poor deluded victim who has been sent to his last account from an overweening confidence in one or other of the much-belauded patent medicines. The facility afforded for obtaining a narcotic, whether it be in the form of opium, morphia, or the deadly chloral, is a consideration which cannot be overlooked. In no other country can poisons be purchased wholesale without a

strict inquiry as to the purpose for which they are required; but in England they are sold openly and without restriction, under the guise of patent medicines. It may be said that the revenue derived from this source is so great that it would be difficult to find other means for replenishing the exhausted coffers of the Exchequer. The income from the tax, however, is only about £150,000, and from this will in all probability have to be deducted the expenses, by no means light, of maintaining the department and the fees paid to the common informer. This, however, is a phase of the question with which we are in no way concerned. *Our national health is of such paramount importance that no amount of money, much less a paltry £150,000, could compensate for its degeneration or decay* On all grounds, then, it is essential that the Patent Medicines Stamp Act should be at once repealed. Delay is fraught with danger, and prompt and decided action is imperatively demanded.

OVERSTRAIN IN FEMALE EDUCATION.

THE oppression of overwork is not a new evil, but a slavery of all ages. It has varied in intensity and in area of incidence from time to time, and has been forced to give way to corrective measures, but blind custom or desire has again and again revived its heedless excesses. Our own time, perhaps more than any other, has yielded to the enthusiasm of progress, and has removed many helpful restraints of labour, which naturally aid it by preserving its vital power. Women suffer in consequence as well as men, and probably to a greater degree. The reason for this is not that their aptitude is generally inferior to that of men, but that their capacity for work is on the whole smaller. There is a good deal of relatively blank time in their lives on account of their periodic indispositions. There is a tendency with some to make light of such poor physical considerations when they seem to impede the march of intellect, and it is for studious work that women hunger most. Exceptions to rule are pointed to, of women who have endured very hard studies and escaped uninjured. But many more do not escape. Dr. Thorburn of Manchester, in a lecture on this subject, has shown that the bad effects of over-study on women are largely due, and are felt by themselves to be due, to its unremitting continuance during the menstrual periods. At such times the nervous system is drained of energy in an equal or even greater proportion than any other. The obvious suggestion is that mental pressure should for the time be relieved in a corresponding degree. If this precaution be not taken, not one important function, but all, will probably suffer. Under the like circumstances of strain from worry or work, the changes of the climacteric are apt to appear prematurely, and sometimes to continue and preclude by their presence the effectual discharge of any occupation whatever. How best can the difficulty be met? Not certainly by denying to women even the highest type of education. The *kind* of brain-work does not constitute the danger, but the excessive and restless ardour with which it is apt to be maintained. It is not easy to see how, in a large class of female students, the monthly variations of energy in each case can be understood and allowed for. No such mechanical regulation, however scientifically correct, could well be introduced into our social arrangements. The better plan would be to keep the average rate and quantity of work during the whole educational period somewhat under the full mental capacity of learners, so that the reserve energy unused during three-fourths of the time might be available to supplement the deficient vigour of the other fourth. The frequency of examinations is a separate consideration which should not be forgotten. Participation in these contests should be strictly dependent on the health at the time of individual competitors, a matter not difficult of decision. Moderate physical exercise in tennis grounds or suitable gymnasia should in every ordinary case form the co-efficient of a healthy scholastic training.

PRECAUTIONS AGAINST CHOLERA AT MONACO.

THE little Principality of Monaco, always distinguished among other health-resorts of the Riviera by the scrupulous order and cleanliness of its streets, has adopted, early in the day, energetic measures to ward off the danger of cholera. Though the health of the population is exceptionally good, the authorities are alive to the risks they incur. The sewers, the public latrines, and urinals are now disinfected every day by agents of the Government. Narrow passages and streets in the old town have all been whitewashed, and the houses of the poorer classes and lodging-houses have been subjected to careful inspection. Cesspools are more frequently emptied, but this operation is preceded by the use of a large quantity of sulphate of iron. The decrees rendering it a penal offence to allow the overflow from cesspools to run into the sewers, or to empty out into the sewers any night soil, have been republished and extensively circulated throughout the Principality. The inhabitants are further called upon to keep their bedroom windows open all day, to boil and filter their drinking water, and to thoroughly cook their food. The markets are strictly watched, fruits and vegetables not absolutely sound, that seem either over-ripe or insufficiently ripe, are at once seized and thrown into the sea. Private shops are also inspected daily and large quantities of fruit have been taken away and destroyed. All who have night duties to perform—policemen, railway servants, &c.—are compelled to wear their woollen clothing in spite of the heat, and they are forbidden to drink crude water, and to touch raw fruits or undiluted spirits. All luggage and goods coming from Toulon and Marseilles must be disinfected before they are allowed to enter the Principality, and throughout the most scrupulous cleanliness is observed. Unfortunately, all these precautions are not sufficient. The entire system of drainage must be reformed before true security can be enjoyed. So long as house drains are not trapped and ventilated, so long as cesspools continue to exist, the Principality will not be free from the menace of epidemic disease. Nevertheless, so far as surface cleanliness and careful scavenging are concerned, it is admitted on all sides that Monaco and Monte Carlo stand pre-eminent among all the other towns of the Riviera.

CRUELTY TO CHILDREN.

As Alderman Cotton, M.P., quaintly put the matter, eighteen feet of signatures were appended to a requisition to the Lord Mayor of London to call a meeting to form a London Society for the Prevention of Cruelty to Children. The proposed meeting has been convened and the Society is formally constituted. We trust it will soon get into working order and fulfil the purpose in view. Mr. Fowler, M.P., was probably right in thinking that the mere thought of being watched would deter parents from many acts of cruelty; but we venture to think much more than simply moral influence will need to be exerted if any real good is to be done. There would seem to be a difference of opinion at the very outset as to what is required. Lord Shaftesbury thinks the existing laws sufficient, while Cardinal Manning considers that they will not serve to do the Society's work. We trust that before long this new beneficent organisation will show its vitality by introducing some salutary reforms, particularly with regard to the little children who are turned out into the streets to earn a fixed sum, on gaining which their prospects of bed and board depend.

THE COLLEGE OF SURGEONS MUSEUM.

IT is scarcely necessary to state that Sir Henry Thompson's recent lectures at the Royal College of Surgeons of England constitute an important and eventful contribution to the literature of the surgery of the urinary apparatus. In these lectures Sir Henry set forth the whole of his remarkable experience. Not the least interesting circumstance connected with the lectures was the presentation to the Museum of the College of a cabinet containing many hundred calculi. The two principal matters brought forward in the lectures were—first, the great improvement in the statistics of the operation of lithotrity in the modern mode of free crushing and complete evacuation of the fragments; and second, the value of the method of digital exploration of the bladder in cases where the nature of the vesical trouble is obscure. The lecture on the removal of tumours of the bladder by operation was of especial interest, and was illustrated by microscopical specimens and drawings, in the preparation of which Dr. Heneage Gibbes largely assisted. The cabinet containing Sir Henry's unique collection of calculi was shown last week at the exhibition of the additions made to the Museum during the past year. Respecting this collection, Mr. Flower, in his annual report to the Museum Committee, says: "Upon the conclusion of his course of lectures on the Surgery of the Urinary Organs, Sir Henry Thompson presented to the Museum the cabinet containing his very important collection of calculi, the result of 812 operations by lithotrity and lithotomy, all neatly mounted in glass capsules, and every specimen accompanied by authentic details of the case. The value of this series as illustrating an episode in the history of surgery needs no comment."

PARASITES IN FISH AND FLESH.

THE free discussion of any vexed question is rarely an unmixed good. This arises from no defect in the principle itself, but from the fact that there are usually persons who rush to the front and speak with an authority that is only self-accorded. In every-day life such conduct savours of mere impudence; but when, as has happened in regard to the so-called "mackerel scare," the hasty utterances of uninformed persons have resulted in the production of much misery amongst the poorer classes, who in great part rely upon a fish diet, then we may justly characterise such conduct as blameworthy. We would willingly have let this matter drop, being well satisfied with the trustworthiness of the statement of the Inspector of Fisheries, supported as it has been by the more detailed explanation supplied by Dr. Cobbold; but it appears that in consequence of the "scare" several tons of healthy fish have been weekly sacrificed, the poor absolutely refusing to purchase mackerel. On this account it is a public duty to call further attention to the subject. After the conferences which took place at the Fisheries Exhibition last year, it seems strange that the good work then done in connexion with fish parasites should be so soon disregarded. Numerous specimens of the particular parasite (Filaria piscium) around which so much discussion has arisen were exhibited at last year's show, not only from mackerel, but also from the herring. There are many points requiring attention, but that which calls for immediate remark is the question as to the amount of temperature necessary to destroy parasites of all kinds infesting the flesh of fish and other animals used as food. So far as Dr. Cobbold is concerned, nothing could be more explicit than his recognition of foreign research in this matter. Discarding his own efforts, which, after all, were by no means unsuccessful (as the confirmatory and more extended labours of Dr. T. R. Lewis at Calcutta have shown), he rested his recent statements chiefly on the investigations of Professor Perroncito of Turin. This *savant*, after a series of elaborate experiments, which are recorded in the *Osservatore Gazzetta d. Cliniche di Torino* and in several scientific and professional periodicals, finally established the fact that cysticerci and other parasites infesting flesh perished invariably at a temperature below 50° C. (122° F.) It must be borne in mind that Professor Perroncito himself had been rather severely taken to task for having, on more slender and initiatory experimental work, previously asserted that, "if it is not certain that the cysticerci die at from 80° to 100° C., we are quite sure that they dry up and become completely mummified at 125°, 130°, and 150° C. (257°, 268°, and 302° F.)" It must be remembered, moreover, that the final results were not arrived at until after certain published statements by Professor Pellizzari, who conducted researches in relation to sanitary measures effected by the Municipal Commission of Florence. In these investigations Pellizzari was assisted by Dr. Tommasi, the translator of Dr. Cobbold's lectures delivered at the Middlesex Hospital. In Dr. Tommasi's *Appendice* to another of our English author's volumes ("Parasiti interni degli Animali Domestici") readers of Italian will find a full account of these researches. Referring to these investigations, by which it was concluded that a high temperature was necessary for the destruction of parasites, Professor Perroncito says: "Towards the end of 1874 Professor Pellizzari disputed the results of my investigations made in 1872, and agreed with Dr. Lewis, who had already stated that the cysticerci exposed to 55° C. can be held to be dead after the lapse of five minutes. It may be argued that the Italian *savant* was not dealing with nematoid worms, and that therefore his labours did not affect the fish question. Such an excuse is altogether inadmissible, seeing that Perroncito found 50° C. alike destructive to Trichina spiralis, to Strongylus filaria, and to two species of filaria. The filaria of the mackerel is just as easily destroyed by heat as is any other species of the same genus of parasites, wherever it may happen to be found.

DISEASE AND WATER IN INDIA.

IN connexion with the interest which now attaches to the condition of tank water in India, we would refer to an excellent lecture on the relation of wholesomeness of water and the maintenance of health which was delivered some two years ago to the native population by Dr. M. C. Furnell, Sanitary Commissioner for Madras. The lecture fully confirms by means of its numerous details the views that have so often been expressed as to the facilities which are afforded by the tank water supplies of India for the diffusion of infectious diseases, and especially of cholera and of enteric fever. Men and women habitually wash their clothes and garments and then bathe their bodies in the same tank as that from which they take their water for domestic purposes; the approaches to some of the tanks are filthy in the extreme, and Dr. Furnell has even seen women collecting water for home purposes, when the contents of the tank have at the same moment been in use for ablution being foul to the senses of sight and smell. So long as conditions such as these remain, it must be obvious that one of the most fertile and well-known channels exists for the rapid diffusion of cholera, and it is impossible to prove that the aerial communication of this infection is the one which is most commonly in operation. The multiplication of such lectures to the native population would be most useful, and we are glad to note that in addition to the circumstance that the Bombay Government ordered Dr. Furnell's lecture to be translated into the Vernaculars of Northern and Southern Deccan, Gurjera, Sind, and Arabic, it has also been reproduced in several other languages.

THE CHOLERA EPIDEMIC.

THE epidemic of cholera in the south of France does more than maintain itself; it increases, and it has diffused itself over a somewhat wider area. But for all that, it is still a limited outbreak, and the hope that it may in the main be confined to the neighbourhoods first attacked may perhaps be realised to a greater extent than was at first thought possible. Cholera, however, has more than once remained in a comparatively quiescent condition prior to a sudden and widespread extension, and hence it will be well to be prepared for all contingencies. So far the rumours as to its extension to Paris and towns in other countries do not seem trustworthy, and hitherto no case has been brought into the United Kingdom. It is true that early next week a vessel, alleged to be infected with cholera, may be expected at Cardiff; but since the occurrence has now been anticipated for several days, it ought to be quite possible for the sanitary authorities so to deal with the case as to prevent any importation of the infection. It is essentially on our being prepared beforehand that we must rely both on our coast and inland; and with a view to this the Local Government Board have re-issued to all sanitary authorities the excellent memorandum of Precautions against the Infection of Cholera which was prepared last autumn by Dr. Buchanan, their medical officer, and which specially calls attention to the duties of sanitary authorities in the matter of the adoption of all such measures of prevention as will enable them to check extension of infection in case any mild attacks of cholera escape the vigilance of port and other authorities on the coast line.

NORTH LONDON CONSUMPTION HOSPITAL.

THE affairs of this hospital have been in an unsatisfactory condition for many years. It appears from a letter to the governors, signed by the chairman of the Committee of Management and also of the Committee of Investigation, that there has been practically no management whatever from the date of the foundation of the hospital up to December, 1883. For example, an Investigation Committee, appointed a year ago by the governors, has brought to light "that the books and accounts had been kept in a most irregular way; that the system adopted by the secretary made it very hard to find whether, or when, donations paid to him had been paid to the credit of the hospital; and that the irregularities were such as to make it very difficult to exculpate the character of the secretary, although all the investigation tended to prove was that his methods, and not his character, were at fault. The committee were equally culpable, as the meetings for upwards of ten years had been most irregular, and without a quorum, and all natural stimulus to precision and care was withdrawn from the secretary." No meetings of governors seem to have been held till quite recently. Unfortunately, and possibly almost necessarily, the medical staff must share the responsibility of the past mismanagement, and there are many points connected with the discharge of their duties at the present time which the Committee of Management will have to remedy without loss of time. The senior physician, Dr. Timms, states in a letter to the Hampstead papers that he was responsible for the management up to 1868, and the majority of abuses stated above were rendered possible by the action of the committee when he had them under his own control. The publication of the private address of each member of the staff on the foil of the out-patients' notes, and their exhibition upon large boards in the out-patients' room of the hospital, are practices which must be unreservedly condemned. It is further matter for regret that, with one exception, the chief speakers at the meeting of governors on the 1st inst. who spoke against unity of purpose and compromise were those members of the honorary staff who are governors. It is an unfortunate omission from the rules that no date is fixed for the retirement of members of the staff, or for their removal in case of necessity. New regulations have, however, been proposed to remedy these omissions; and meanwhile it will be a graceful act if the senior physician will tender his resignation and thus become eligible for election as consulting physician to the hospital. We fully endorse the wisdom of the decision arrived at by the governors, to forget the past and to rest content by securing the best of good management for the future. There are two points of great public importance which arise out of the revelations made in connexion with the management of this hospital. First, the fact that the Hospital Sunday and Hospital Saturday Funds have for ten consecutive years made substantial grants to this hospital, which throughout the whole period never held an annual meeting, never had a properly constituted committee, never possessed any reliable accounts, and never produced evidence that the contributions received were paid to the credit of the hospital, proves beyond question that stricter inquiry must be made by the Councils of these Funds in future before they make a grant. Someone should certainly be sent on behalf of each Fund to inspect a hospital and the books before a grant is made. On the other hand, it is matter for congratulation that, through the efforts of Mr. Burdett, Mr. F. D. Mocatta, Mr. B. A. Lyon, and other members of the Investigation Committee, there is now every prospect that the North London Consumption Hospital will be managed upon the best known principles of hospital administration. Indeed, there is reason to hope it will become as large, important, and prosperous a hospital in the north of London as the Brompton Hospital, which may be regarded as the South London Consumption Hospital.

ISOLATION ARRANGEMENTS AT LIVERPOOL.

As the result, apparently, of a visit from Dr. Mouat of the Local Government Board, the Corporation of Liverpool have at last made some arrangement with a view to meeting the wants of their district in the matter of the isolation of infectious diseases. The intention seems, in the first instance, to be limited to dealing with small-pox, and even as regards this disease the accommodation is to be only of a temporary character. But now that the Corporation have been compelled to assent to the principle that it is the duty of the sanitary authority, and not of the Poor-law authority, to provide the means of isolation necessary for the protection of the public against the risk of infection, it is to be hoped that they will not cease in their labours until they have made proper and sufficient permanent provision for their district in this respect.

TRAINED NURSES FOR THE SICK POOR.

THE passing of Gathorne Hardy's Act of 1867 may be said to have created a revolution in the method of dealing with the sick poor in the metropolis, providing as it did for their treatment in establishments under separate management and quite distinct from the workhouses. The various boards of guardians have loyally carried out the provisions of the Act, and in all districts of London are to be found parish infirmaries specially designed and erected for the care and treatment of sick paupers, a medical superintendent being in charge of each infirmary. The finest institution of the kind is that provided by the guardians of St. Marylebone at Notting-hill, which was opened by the Prince and Princess of Wales in 1881, that occasion being the first on which Royalty had assisted at any ceremony in connexion with a Poor-law establishment. The St. Marylebone guardians soon found the same difficulty that had been experienced

elsewhere, of obtaining suitable trained nurses, of whom they require a staff of fifty-six; and, finding that the efficiency of the working of their large infirmary was likely to be much impaired by this scarcity of nursing help, they decided upon the step—till now novel in Poor-law administration—of erecting a building as an institution for training nurses. This establishment, which comprises accommodation for forty probationers and nurses, with every proper convenience for their comfort, and includes lecture-rooms, has been erected adjoining the infirmary, at a cost of £12,000, and will be opened by H.R.H. Princess Christian on the 22nd inst. In the regulations for the administration of this much-needed work, the guardians are acting in connexion with the Council of the Nightingale Fund, who are associated with them in this desirable object, the working of which will be watched with great interest by those who know the difficulties connected with the nursing of the sick and infirm who come under the care of the Poor-laws.

SUNSTROKE.

THE past few weeks have not been unattended with the perils to health which accompany continuous warm weather. Sunstroke, comparatively rare in our temperate climate, has already been reported. It is somewhat surprising that, in the circumstances under which so many of us, particularly children, live and go about, we do not hear of it oftener. Among the poor, bareheaded children are at least as common as those with hats. They are "only about the doors," and care is disregarded. In a wealthier grade it is not unusual to find infants wheeled about in perambulators guiltless of a hood, even in a bright and hot noon-day. Persons more advanced in age are apt to be careless in their own way. Notwithstanding the sanitary value and the comfort of broad summer hats, athletes at times, and for long at a time, interpose no more than the skull between a delicate brain tissue and a temperature of 100°, or more, in the sun. Young ladies now more than ever raise over the crown the hair which naturally rests upon the nape of the neck and there protects the seat of the vital nerve-centres. Fortunately these have another means of protection from solar heat in the parasol. Sunstroke is best treated by prevention, and enough, perhaps, has been said to direct public attention to the need in such a season as this of adapting means to this end.

CRUEL QUARANTINE IN SHETLAND.

THE evil results of ignorance and want of human intercourse have found unseemly illustration in connexion with a recent outbreak of typhus fever in Shetland. Two cases of disease were attended by circumstances of wilful cruelty which appear hardly credible. Dr. Hanson of Mid Yell became infected while visiting among the victims of the epidemic. During his illness he received no aid or attention whatever from any islander, save his own domestic, the schoolmaster, and a kind lady, who amid much discouragement supplied the sick man with necessary food. After some time a nurse was procured from Edinburgh, and, thanks chiefly to her careful management, the issue of this case was satisfactory. To all these measures of mere humanity the people of Yell offered persistent opposition. They refused all assistance, abused those in attendance, and would hardly allow provisions to be taken to the doctor's house. All this, be it remembered, to the man who had spared himself least in attention to those who were stricken with the same disease, and who owed his illness directly to his professional self-forgetfulness. The island of North Yell was the first attacked. It was here that Dr. Hanson contracted the fever. One would have expected that here at least the pressure of a common evil might have led to some feeling of sympathy with the sufferers; but it was not so. Another gentleman, who officiated both as minister and medical attendant, succumbed to the prevailing malady after five days' illness. During this period not one of his parishioners would even come to inquire about him. After his death the same panic-stricken fear induced them to forbid all intercourse with his family, even for the purpose of burying the body. A coffin could hardly be obtained, and decent interment might never have been accomplished if it had not been for the prompt and efficient help rendered by some Scottish fishermen who were cruising along the coast. The history of epidemics can probably furnish few more pitiful details than these. Happily for the reputation of mankind, it has also afforded instances of heroic regard for duty. It is difficult to believe that, even at the remotest point of our islands, every heart can be so dead to generous feeling as to acquiesce entirely in the barbarous and cowardly quarantine lately instituted there. Precaution let there be, and first of all cleanliness and fresh air in every dwelling; but, in the interests of health, no more of this superstitious and heartless dread of an evil which may and must be remedied.

THE HEALTH EXHIBITION AND THE HOSPITALS.

THE grand *fête* in aid of the London hospitals, to which we alluded last week, will be held on the evening of Wednesday, July 23rd, under the special patronage of the Prince and Princess of Wales, to whom the initiative is due, and who have announced their intention of being present. On this, the second of the two special Wednesday evenings (the first having been devoted to the *conversazione* given by the Council of the Society of Arts and the Executive Council of the Health Exhibition, on the 9th inst.) for which season and other tickets are not available, the price of admission will be raised to ten shillings; and as doubtless the visitors, having once gained entrance, will readily find other opportunities of loosening their purse-strings in so good a cause, we anticipate a very handsome total. The money thus obtained will be handed to the Lord Mayor for distribution among the various metropolitan hospitals by means of the organisations of the Saturday and Sunday Hospital Funds. The grounds will be illuminated by 20,000 variegated lamps, and special effects will be introduced in connexion with the illuminated fountains. The doors of the Exhibition will be opened at 7.30 P.M., the *fête* commencing at eight. The project must necessarily command our warmest approval and heartiest good wishes; nevertheless, we still venture to hope that at the final adjustment of accounts the claims of the hospitals to a share of the profits—and, judging from the extraordinary popularity of the Exhibition, its earnings appear likely to reach a very large amount—may not be thereby discounted or in any way cast into the shade.

CHOLERA REMEDIES.

ATTENTION has been called by M. Klaczko of Vienna to the prophylactic value of petroleum or paraffin, based on the alleged fact that the workers at the petroleum wells of Galicia have "always enjoyed perfect immunity from cholera." The suggestion is that petroleum acts as a germicide. M. David Dinin of Paris writes to us respecting the use of powerful antiseptic agents in the disease. He avers that sulphate of copper acts merely in this way, and is often inoperative, as in the case of the late M. Thuillier. The perchloride of mercury, or rather the red iodide, being the most powerful of all germicides, he asks whether it can be shown that syphilitic subjects under mercurial treatment enjoy an immunity from cholera, and suggests that iodoform, a less dangerous drug and more easily administered, should be tried.

CORONERS AND MAGISTRATES.

AT an inquest recently held at Elmer's End Station on the South-Eastern Railway, on the body of a platelayer who met his death by accident, one of the jurymen asked if the doctor who saw the deceased should not have been called. The coroner, Mr. E. A. Carttar, replied that it was not necessary in the present instance, and in the course of his remarks stated that the county justices not only surcharged him with medical fees which they deemed had been unnecessarily expended, but that they had gone so far as to take exception to his holding inquests in cases where the mode of death appeared evident, and had intimated their intention of making him pay the whole expenses of the inquiry. If these alleged facts be true, and we see no reason to doubt that they are, the sooner the legal obligations of coroners are made public the better. It is perfectly monstrous that a county magistrate should be in a position to criticise and pass judgment on the acts of an officer, holding a post of high responsibility. Fortunately, however, an appeal can be made to the Home Secretary, who can, if he sees fit, make an order for the disbursement of moneys paid by a coroner in the exercise of his discretion and the discharge of his duty. Now, coroners are usually paid by salary, and therefore they are not open to the charge of holding unnecessary inquests for the sake of increasing their emoluments, and for this reason they should be supported by the public and the medical profession against the arbitrary and overbearing interference of persons who are often imperfectly acquainted with the merits of the case in question. If such exhibitions of false economy are allowed to go unchallenged, the coroner's court will soon become a dumb show, to say nothing of the incentives that would be offered to the development of crime by reason of the check put on its detection.

M. PASTEUR'S HYDROPHOBIA EXPERIMENTS.

THE experiments which M. Pasteur is reported thus far to have made are said to be an unbroken success. Fifty-seven dogs have been the subjects of investigation. Of these, nineteen were rabid, and by these thirty-eight healthy animals were bitten under uniform conditions. Of the thirty-eight, one-half the number had been previously inoculated or "vaccinated" with attenuated virus; the other half had not. The latter, without a single exception, died with unequivocal signs of rabies, whereas the nineteen others remain as well as ever. They will be watched for a year by veterinary surgeons to see whether the inoculation holds good permanently or only temporarily. If rabies be not spontaneous in its origin, and if the experiments of Pasteur all turn out successful, there seems no reason why canine madness should not be extirpated from our midst.

THE BOWER AND KEATES CASE.

THE entire medical profession will learn with sincere regret that this case has on the appeal of the plaintiff been set down for a third time. When it was heard before the Lord Chief Justice a verdict was given for the defendants. At the first trial Mr. Justice Field left these questions for the jury to decide:—1. Did the defendants know at the time of the operation, or ought they to have known, that the child was suffering from diphtheria? 2. Did they know, or ought they to have known, that suction of the tube would be dangerous? 3. Was the plaintiff's illness caused by sucking the tube? 4. Could his illness have been prevented or diminished by warning and precautionary measures? The result was that the jury did not agree, and were discharged. The grounds for the recent decision of the Divisional Court, composed of Mr. Justice Field, Mr. Justice Manisty, and Mr. Justice Lopes, were in general terms that the Lord Chief Justice did not lay the case clearly before the jury, and, in particular, that he ought to have directed their attention to the following issues: (1) Ought Messrs. Bower and Keates to have told the defendant that the case was one of diphtheria, and that he ran a risk in sucking the tube? and (2) ought they not to have taken precautions to avert the disease, or lessen its severity if contracted? Concerning the legal technicalities, we do not wish to say a word, the more so as the case is again *sub judice;* at the same time, we agree with Mr. Justice Field that "it was a pity the action should have been brought, no doubt under the influence of mistaken feeling." This opinion will be fully endorsed by Messrs. Bower and Keates' professional brethren.

ISOLATION AND INFECTION AT PRESCOT.

THE Prescot rural sanitary authority has wisely decided to erect a hospital for infectious diseases, and in its capacity as a Poor-law authority it has determined no longer to admit non-pauper infectious cases into the workhouse. One member of the authority maintained that if patients were admitted into an infectious hospital belonging to the sanitary authority they would be just as much paupers as if they were admitted into the workhouse, on the ground that wherever expense is incurred by an authority or by the ratepayers, those profiting by it are virtually paupers. Quite apart from the fact that the law has decided otherwise, it is curious that anyone should hold such a view. The adjoining urban district of Prescot is less fortunate than the rural one in its decision. Instead of either combining with the rural district in providing a hospital, or erecting one of its own, it has sought to make an arrangement with the authorities of the Netherfield Institution in Liverpool, a city where infectious hospitals have already been much overcrowded, and where, in consequence, there is grave reason to believe that one infection—namely, that of small-pox—has been spread to the surrounding community. The arrangement, being also contingent on empty beds being available, will probably fail at some critical moment. Indeed, the whole scheme savours of an ill-matured plan, for the hospital authorities advise that if any difficulty should arise in the removal of patients, "cabs can be used, if properly disinfected afterwards." We should like to know the process by which a small-pox infected cab, with its cloth and stuffed seats and linings, can be "properly disinfected"; and we can only wonder that such advice can emanate from a hospital which professes to prevent the spread of infection.

INSURANCE WITHOUT MEDICAL EXAMINATION.

UNDER the new regulations for Government Life Insurance, a novel experiment is being tried, the result of which will be watched with interest. Insurances for sums not exceeding £25 are now granted at any post office savings bank without any medical examination. If, however, an insurant should die before the second annual premium becomes payable, the amount of the first premium, and no more, will be paid to his representative; should the insurant die after the payment of the second, but before the third premium becomes due, the representatives will be paid only half the amount of the policy. After the payment of the third premium the policy is entitled to full benefit. It is neverth eless provided that in case of death within two years of an insurant who has not been medically examined, if it can be proved to the satisfaction of the Postmaster-General that the death was caused by accident, the full amount of the policy will be paid. Persons proposing to insure for sums not exceeding £25, and preferring that their policy hould have the full benefit of insurance at once, can

undergo a medical examination by payment of a fee of half-a-crown to the medical examiner. The rules do not explain the nature of the arrangement by which the fee for medical examination to be paid by the insurant is to be supplemented. The new system by which insurances may be granted through post office savings banks affords great facilities for industrial insurance combined with absolute security, which, it may be hoped, will commend the system to the working classes. We are glad to observe that no insurances will be granted upon the lives of children under eight years of age, and the amount is limited to £5 upon children aged between eight and fourteen years.

OPHTHALMOLOGICAL SOCIETY.

THE annual meeting of this Society was held on July 4th. Mr. Streatfeild, the Treasurer, read his report, showing that the Society was in a prosperous state. The report of the Council, read by Dr. Abercrombie, stated that the nucleus of a library had been formed by the donation of some books by the President and a few others. The rules relating to the library were practically those governing the library of the Medical Society. It was also announced that the first Bowman lecturer would be Mr. Jonathan Hutchinson; the lecture will be delivered in November next. The following is the list of officers and Council elected for the year 1884–85:—President, Jonathan Hutchinson, F.R.S. Vice-Presidents: Sir Wm. Bowman, Bart., F.R.S.; C. E. Fitzgerald, M.D.; Henry Power; Thomas Reid, M.D.; T. Shadford Walker; J. C. Wordsworth. Treasurer: J. F. Streatfeild. Secretaries: John Abercrombie, M.D.; W. A. Brailey, M.D. Other members of Council: George Cowell, G. A. Critchett, R. Marcus Gunn, George Johnson, Stephen Mackenzie, Charles Macnamara, E. Nettleship, Priestley Smith, Simeon Snell, J. Sympson, John Tweedy, W. Spencer Watson.

"VIEWING" THE BODY.

THERE is a great outcry against the practice of "viewing" a body as the legal basis of a coroner's inquest. We are not prepared to defend the practice in question; it is probably useless in nine cases out of ten, and often a mere farce as conducted in the tenth instance. Meanwhile, we cannot but think that it is a strong and impolitic measure for coroners to take upon themselves to dispense with the "view" at caprice or discretion. There should certainly be uniformity in the procedure. It is certain there must be something equivalent to a "view" for identification and other purposes, or it may happen that some day a criminal dies and is buried on "a coroner's certificate" without actually being dead, except to the world of informers and police, until such time as he may reasonably expect to be forgotten. A body there must be; and good evidence as to its character and condition must be forthcoming if the "view" is to be abandoned.

WHISKY AS AN ANÆSTHETIC.

IN his address as President of the Ninth Annual Session of the Arkansas State Medical Society, Dr. Keller is reported to have spoken as follows on the subject of whisky as an anæsthetic:—"To Dr. Link of Indiana are we indebted almost entirely for having gone far towards placing whisky not only along with ether and chloroform as an anæsthetic, but also in discovering its antiseptic power, equally as safe and effective as any other. So well satisfied is that gentleman from long use of it as his only anæsthetic and antiseptic in amputations, that he asserts he has discarded all others, and in his reports of several hundred cases he says that he has seen no manifestation of pain during any amputation—no unhealthy action in any stump, and not a single death to mar the report." The manner of anæsthetising the patient seems to be to administer one or two ounces of whisky by the mouth every ten minutes "until complete drunkenness is reached," and then, with or without one or two inhalations of ether or chloroform, to proceed to operate. On the face of it, this procedure appears to be open to righteous condemnation. It is well known that acute gastritis may be set up by such means, and the onus of proving that such large imbibitions of alcohol are inoffensive rests with Drs. Link, Keller, and others who may choose to employ the drug. It is possible—anything is possible in medicine—that such treatment may be innocuous; but until more accurate knowledge is forthcoming we prefer to believe the contrary.

CONVERSAZIONE AT THE HEALTH EXHIBITION.

A VERY successful and pleasant entertainment was given in the buildings and gardens of the Health Exhibition on Wednesday evening last, by the Executive Council and the Council of the Society of Arts. Most of the exhibitors kept their stalls open, and those having machinery in motion kept it running as during the day. The beautifully illuminated gardens and their fountains afforded a *coup-d'œil* to which Londoners are but little accustomed; indeed, it is only quite lately that they have had any opportunity at all of proving that they are capable of appreciating such form of amusement, and of taking their pleasures not sadly, but rationally and temperately. The bands of the Grenadier Guards and the Coldstream Guards, with those of the 1st Regiment of the French Engineers and the 7th German (Magdeburg) Cuirassiers, discoursed excellent music; while a novelty was afforded by the performance of a Chinese band in the gardens by the Chinese Court. A perfect summer evening enhanced the enjoyment of many thousand guests.

PARKES MUSEUM OF HYGIENE.

A GENERAL meeting of this Corporation was held on Wednesday last, when the annual report was read and dopted. As was to be feared, the lamented death of the President, H.R.H. Prince Leopold, is regarded by the Council as an incalculable blow to the progress of the Museum. A class of Hygiene is about to be formed at the Museum in affiliation with the Science and Art Department, South Kensington. Considerable developments have been made in the book department of the Museum. The excellent library and reading-room have been thrown open to students at the small annual fee of 5*s*. Good work has been done by the holding of lectures and demonstrations. Special thanks are due to the Treasurer, Mr. Berkeley Hill, to the Hon. Librarian, Dr. Louis Parkes, and to the Hon. Secretary, Dr. Dawson Williams. No less than 7000 persons have visited the Museum during the past session. Nevertheless, owing to the expenses incurred in removing the institution to new premises, the funds of the Corporation are not in a very satisfactory state.

THE DIFFUSION OF SMALL-POX.

WE are glad to see that the Local Government Board have instructed Mr. Power to resume his inquiries as to the diffusion of small-pox from the hospitals of the Metropolitan Asylums Board. The inquiry commences with the Fulham Hospital; and, as on the occasion of the first investigation in 1881, circular letters have been issued to all medical practitioners within a wide radius of that establishment asking them for confidential information concerning all small-pox attacks which may come under their observation.

The inquiry is one of such immense importance both for the purposes of the metropolis and elsewhere, that we trust all will join in rendering Mr. Power every assistance they can by periodically sending him the information he needs on the forms which are prescribed, and which are supplied to all medical practitioners.

TEMPORARY PRESERVATION OF POST-MORTEM SPECIMENS.

IN the second number of *The Asclepiad*, amongst the Opuscula Practica, Dr. Richardson describes a method of temporarily preserving specimens taken from the dead body. A wide-mouthed bottle, with a large stopper which is made to fit evenly by the use of a little glycerine, is filled with a mixture of common coal gas and one drachm of ammoniated chloroform. The stopper is then tied down. Any part which is desired to be preserved is placed in a fold of soft muslin and gently pressed so as to remove superfluous fluid. The next point is to introduce the part enveloped in the muslin into the bottle without displacing more of the gaseous contents than necessary. The ammoniated chloroform is supposed "to prevent the breaking up of the water of the tissues," and the carbon monoxide of the coal gas preserves the colour of the specimen.

SIR HENRY ROSCOE.

HER MAJESTY has conferred the honour of knighthood upon Professor Roscoe of Owens College, in consideration of the services rendered by him in connexion with the Technical Education Commission. Born in 1833, Professor Roscoe took the degree of B.A. at the University of London in 1852, and subsequently graduated Ph.D. at Heidelberg. In 1859 he was appointed to the chair of Chemistry at Owens College, and his knowledge of the actual working of the German system has no doubt contributed materially to the determination of the course to be followed by the Victoria University. Sir Henry Roscoe's latest and perhaps most important work is the "Treatise on Chemistry," forming six large volumes, which he wrote in conjunction with Professor Schorlemmer. The first part appeared in 1877, and the concluding volume a few months ago.

THE DRAINAGE OF OXFORD.

IN an annotation which appeared in our issue for June 14th, p. 1086, we urged the University authorities of Oxford to specially bestir themselves in the matter of the water-supply of the city, and we are glad to learn from a letter which appears in a contemporary that, at the Vice-Chancellor's suggestion, the Hebdomadal Council have appointed an informal committee of scientific persons to inquire into the water question. In the meantime, it is understood that the Hog-acre stream, with its ill-flavoured contributions, is no longer to be drawn upon, and that the water of the Railway Lake, the reservoir from which the city is supplied, is henceforward to be supplemented by some other of the network of streams by which Oxford is surrounded.

BENGAL CINCHONA PLANTATIONS.

THE annual report of the Government cinchona plantations in Bengal, drawn up by Dr. King, shows a prosperous state of affairs. Considerable changes were effected during the year in the proportions of the different species of cinchona under cultivation. In the plantations at Mungpoo and Sittong some 232,200 red bark trees were uprooted, and these were replaced chiefly by the yellow bark variety. The new plantation at Rungjung was also planted out with 42,200 trees of the yellow variety. Calisaya ledgeriana has been found by analysis to yield much better supplies of quinine than the red bark. The total number of cinchona trees of all sorts at the close of the year was 4,740,811, of which 3,532,000 are cinchona succirubra. The entire produce of the plantations for the year was 305,160 lb. of dry bark.

THE SOURCE OF BILE ACIDS.

ACCORDING to Dr. Jensen (*Philadelphia Medical World*), Pettenkofer's test for bile also holds good for peptones. It had long been surmised that the slight bitterness of the true peptones is due to the presence of bile in one of its initial stages, as manufactured by the process of digestion. Experiments have been made on boiled albumen, flesh, and a solution of gelatine, after being converted into peptones in separate bottles by a minute proportion of Dr. Jensen's pepsin. The albumen peptone gave a much stronger reaction with the bile test than did the peptone from flesh; and the gelatine peptone was almost unaltered by the test. It is thus thought that the albumen of food furnishes the chief elements for the bile.

WOOLSORTERS' DISEASE AT BRADFORD.

THE inquest on a case of woolsorters' disease at Bradford, which was adjourned from June 18th to the 2nd inst., has been yet further adjourned to the 21st inst., in order to give manufacturers the opportunity of stating the precautionary measures in force at their factories to prevent the transmission of the disease. On the 2nd much evidence was given by medical witnesses, including Drs. Bell, Wilmot, Cadman, and Britton; and no pains are being spared to make the inquiry an exhaustive one. Since this inquiry commenced another fatal case has occurred in the same town.

NORTH-WEST LONDON HOSPITAL.

WE announced last week that a conference between representative members of the profession and a small subcommittee of the Board of Management of the North-west London Hospital was being arranged with a view of so framing its rules and regulations as to bring them into harmony with those of other institutions. We learn that Sir Spencer Wells, Mr. John Marshall, and Mr. Ernest Hart have consented to join in this conference.

MEDICAL LIFE PEERS.

WE understand that Dr. Lyons, M.P., has given notice of an important amendment to be inserted in the Medical Act Amendment Bill, to the effect that two physicians of over twenty years' standing should be made life peers and act as lord justices of appeal in medico-legal trials. Such appointments have been urged by Sir Spencer Wells, Dr. Theodore Williams, and others, and will, if made, considerably strengthen the hands of justice.

HOSPITAL SUNDAY FUND.

THE sum received on behalf of this fund up to noon on the 10th inst. was, in round numbers, £32,000. Amongst the amounts paid in during the last few days is a collection of about £130 made at St. John's, Wilton-road, and the sum contributed at St. Stephen's, South Kensington.

THE Manchester pharmacists have, we understand, sent up very strong representations in favour of obtaining some special representation for their class upon the Committee of the Pharmacopœia to be established under the Medical Bill.

THE universities of Prague and Gratz have each recently established chairs for Hygiene.

A CORRESPONDENT at Cairo writes:—During the month of June there have been a few cases unofficially reported of vomiting and diarrhœa at Damietta, where it will be remembered the cholera of 1883 first appeared on June 22nd. The month's official return gives only seven slight cases of the character of gastro-enteritis, none of which proved fatal. Of these seven, diarrhœa was the chief symptom in three, vomiting in three, and in the remaining case the disease took a dysenteric form. It is satisfactory also to note that the mortality is below the average. And in this respect Damietta compares favourably with Cairo, where to-day the mortality reaches sixty-one, including ten cases of dysentery, six of typhoid fever, one of diarrhœa, two of "gastric fever," and seventeen of gastro-enteritis among children—that is, thirty-six of sixty-one cases, or 59 per cent., are of intestinal disease. In quoting statistics in Egypt, it is always necessary to remember that they are compiled by officials who are mostly ignorant of medicine, on information given by reluctant friends, for it is quite an exception for a sick person of the poorest class to be seen during life by any qualified medical attendant.

THE Mysore medical establishment is to be reorganised (says the *Indian Medical Gazette*), so as to allow of the subordinate staff becoming, in time, entirely composed of natives of Mysore who have passed the Madras M.B. or the L.M.S. Examination of Madras or Bombay. These will be under the supervision of two European officers, one of whom, a member of the Covenanted service, will be head of the Local Medical Department and chief medical adviser to the Mysore Government, and the second, who may be either a junior member of the Covenanted service, or a man selected from the profession in England, will have charge of all medical duties in Mysore.

MR. G. A. WALKER, M.R.C.S., L.S.A., died on the 6th inst. at Barmouth, North Wales, where he had lived in retirement for many years. Deceased played a prominent part in the agitation for the abolition of intramural interments, and in 1840 gave evidence before a Select Committee on the Health of Towns of the House of Commons respecting the sanitary condition of London and its graveyards. He was the author of "Gatherings from Graveyards," "The Graveyards of London," "Interments and Disinterments," and other works.

THE death occurred last week at Southsea of Mr. Ahmuty Irwin, R.N., C.B., late Inspector-General of Her Majesty's Hospitals and Fleets. The deceased became a licentiate of the Royal College of Surgeons in Ireland in 1850, Hon. M.D. of Dublin in 1881, and was in 1874 nominated a Companion of the Order of the Bath (Military Division).

DR. GEORGE HARE PHILIPSON will deliver the Bradshawe Lecture at the Royal College of Physicians of London on Monday, August 18th, at four o'clock. Subject: "Pathological Relations of the Absorbent System."

DR. ARTHUR GAMGEE, F.R.S., has been appointed Fullerian Professor of Physiology of the Royal Institution for three years.

A CASE of meningocele starting at the root of the nose, and hanging down as far as the cheeks, was shown by M. Vallin at a recent meeting of the Société de Chirurgie.

THE Annual Report by Dr. King, of the Royal Botanic Gardens, Calcutta, for the year 1883-84 shows that the establishment is in a flourishing state.

SURGEON-MAJOR LONGMORE has been elected Foreign Corresponding Member of the Académie de Médecine.

DR. TOMMASI-CRUDELI ON CHOLERA.

ON the 30th ult., before the Accademia Petrarca of Arezzo, Dr. Tommasi-Crudeli, whose researches on the bacillus malariæ form a distinct advance in the etiology of intermittent fever, read a paper entitled "Cosa si può fare in tempo di Cholera?" ("What may be done in Cholera-time?") After tracing the history of the three great cholera epidemics that have visited Europe, he remarked that the disease was always an importation, never acclimatised like small-pox; and he defined it as a "contagio-miasma, a morbigenous germ, proceeding from a diseased human body, which never diffuses itself epidemically, except when the excretions containing it find in the soil conditions favourable to its multiplication."

THE CHOLERA GERM AND ITS DISCOVERER.

Filippo Pacini, of Florence, who died just a year ago (*vide* THE LANCET, July 21st, 1883), in 1854 was the first to recognise the cause of cholera in a microscopic organism, which Dr. Tommasi-Crudeli in 1882 classified among the schizomyceti (*σχίζω*, divide; and *μύκης*, fungus), or germs which multiply by simple division. This organism, according to Pacini, attacked the mucous membrane of the intestine; but his doctrine was ridiculed or disregarded till the other day, when the German Commission, investigating the specific cause of cholera in Egypt and in its native seat, the delta of the Ganges, came to the conclusion already arrived at by the Tuscan pathologist. Not only in the soil where fæcal dejections of cholera patients have found their way, but in the bed-linen fouled by these dejections and washed without disinfectants, may the cholera germ multiply. Pacini saw this as long ago as 1856, when, in a Tuscan township where cholera had raged in 1855, a poor woman having opened a chest of linen left to her by her mistress, who had died of the disease, was herself attacked and killed by cholera, which had been absent from the place a full twelvemonth.

LOCAL PREDISPOSITION TO CHOLERA.

The cholera germ imported by patients or their infected clothes becomes epidemic only in countries presenting conditions favourable to its development. This development does not happen everywhere in the same mode, and in certain places it does not happen at all. At Lyons, for example, a very large city on the road from Marseilles to Paris, in both of which the cholera raged, it never took root, although patients went to it from Paris and Marseilles to die. There are other places which are heavily visited on every occasion of the arrival of cholera from the East. Palermo is one of these, and presents a very grave "local predisposition." This predisposition, moreover, may be *intermittent*. At Florence the epidemic was slight in 1854—very severe in 1855. In 1867, knowing that cholera had not yet appeared there, crowds of people, many of them with the seeds of the malady in them, came to Florence, which by that time had become the capital of Italy; but, notwithstanding this immigration, cholera took no root in Florence on that occasion. When the disease has entered a country, we cannot say whether it will take firm hold or not. We only know that its spread may be favoured by four conditions: 1. Porosity of the soil in which choleraic dejections have been allowed to penetrate. 2. Oscillations of the underground waters by which the cholera miasm which has developed in the soil may reach the respirable atmosphere. 3. The accumulation of fæcal matters or of organic detritus infected by the germ. 4. The facilities offered to the diffusion of the germs in the drains, in the soil, in the air of the locality, and in the drinking water. Cholera, it should be added, has a mean incubation period of eight days before it declares itself in the organism.

FUTILITY OF SANITARY CORDONS.

Dr. Tommasi-Crudeli does not believe in sanitary cordons. They are as little able to keep cholera out of a province as custom-houses are to prevent smuggling. In Sicily, in 1837, some communes kept themselves isolated from contact with cholera-visited towns by planting loaded cannon round their suburbs; and in 1867 the same military tactics on the Alban Hills prevented the cholera-stricken Albans from communicating the malady to Castel Gandolfo, or Aviccia. But in

more civilised countries this remedy would be worse than the disease. Besides, the sanitary cordon tends to create a false security, and leads to neglect of hygienic duty, official and private. Quarantine afloat he has more belief in, if properly carried out, with due regard to the incubation period of cholera (eight days). But the sheet-anchor of the prevention of cholera is the exclusion from the dwelling-house and its inmates of the cholera germ. His counsels in this regard are similar to those of the English sanitary authorities—if possible a little more stringent as to the washing with disinfectants of all linen, whether visibly fouled or not with fæcal matter. As to prescribing a diet different from what suits the individual in ordinary health, he ridicules the notion. Let the food and drink be good and generous, the clothing warm (silk or flannel next the skin), and the spirits cheerful. The fear which at once dictates and maintains exceptional modes of living simply invites the onset of the disease. The resisting power of the community to cholera increases with each successive visitation. On its first appearance it made most victims; on the second invasion it found the weaker subjects already killed off, and the survivors better fitted to withstand it; so with the third visitation, and, as far as we can at present judge, with the fourth. "The morbigenous power of the cholera germ," says Dr. Tommasi-Crudeli, "is not attenuated, it only finds a smaller number of persons vulnerable." Other means of augmenting resistance to cholera have not been found. Last year Dr. Burcq suggested small doses of copper as a prophylactic, and all the French Commissioners in Egypt tried the drug, with the following result:—"At the close of the epidemic in Alexandria one day there was but one death from cholera, and that was Dr. Thuillier, the head of the Commission!"

THE INTERNATIONAL HEALTH EXHIBITION.

Group 1.—Food (continued).

WE must begin by correcting one or two errors and omissions which seem important. Messrs. Savory and Moore's condensed peptonised milk is peptonised by pancreatine, and is therefore distinct in character from Mr. Darby's well-known and most powerful fluid meat. Messrs. Peek, Frean, and Co. draw our attention to another novelty, in addition to the valuable "health biscuit" which we noticed. This is the "café biscuit"—a brown, crisp, and very light biscuit, of delicate flavour.

Although the more familiar vintages are for the most part unrepresented in the present Exhibition, the wines collected in the South Gallery are interesting precisely because so many of them are unfamiliar. Of late years many countries have been striving hard to upset the supremacy which Spain, Portugal, France, and the Rhineland have so long enjoyed in England; and it is satisfactory to find that every year the strife becomes more successful. Austria, Italy, and Greece, countries which have produced good wine from time immemorial, seem at last to have convinced England of the fact; and our own colonies, Australia and the Cape, have taken an honourable part in the rivalry. The colonists have had the harder task, for they have had in a few years to learn the methods of growth and manufacture, which in older countries have been the work of ages. The chief exhibitors of Australian wine are Messrs. P. B. Burgoyne and Co., the Australian Wine Company, and the Colonial Wine Company. From time to time the steady improvement of these wines has been recorded in our pages. Many of these are now really excellent, and are beginning to be kept, as a matter of course, in London clubs. It is almost invidious to pick out one for praise, but we think that the Australian "Hermitage," red and white, ought to be more generally known. The Colonial Wine Company exhibit, in addition, red "Carbinets" from California and red "Shiraz" from the Lebanon. The last is an interesting modern revival of what is probably one of the oldest vintages in existence. To see it side by side with wine from Australia and California suggests many thoughts.

The wines of Austria are well represented by the administration of the Weinlaube and the well-known firm of Max Greger (Limited). The "Weinlaube" is a pretty arbour attended by a Dalmatian peasant girl in national costume. The "Austria-blume" and several other characteristic wines are exhibited within it, and there are also some interesting specimens and drawings illustrative of wine making and the ravages of the phylloxera. Mr. Max Greger has been so successful in introducing the wines of Hungary, that nowadays they scarcely require description. "The shareholder's Carlowitz" is particularly recommended by the Company. Mr. E. Vitali has collected in a pretty case (No. 147) some of the best wines of Italy. We have before now analysed and reported on some of these wines, and have found ourselves able to praise them cordially. At present we need only notice the remarkably pretty wickered baskets which adorn the case. Messrs. F. T. Denyer and Co. have a large collection of wines and spirits. The sherries of Sanlucar, including the well-known Manzavilla, occupy a prominent and well-deserved position in the list. The chief peculiarity in the exhibit of Messrs. Stallard and Co. (No. 162) is the old, highly-flavoured, and somewhat luscious white port, made from the white grapes of Oporto. And, finally, we must not omit Messrs. J. Christmas and Co. (No. 129), whose English wines—orange, lemon, ginger, gooseberry, and even champagne, made from real grapes—are good and, we believe, wholesome beverages. Mr. Grant's morella cherry brandy, orange and ginger cognac, and non-alcoholic sparkling morella, also deserve notice, as do the excellent lime-juice preparations of Messrs. Rose and Co. and Messrs. Feltoe and Sons.

There is little to remark about the spirits exhibited. The present popularity of Scotch whisky is abundantly illustrated—a popularity for which it is impossible fully to account, since Irish whisky can hardly be said to be on the whole inferior. We presume the consumption of gin remains much as it was, but rum is seldom drunk except by seafaring men, and brandy is now chiefly used as a liqueur with coffee. The differences between Scotch whiskies seem due chiefly to differences in blending, an art in which great skill is possible. We will not pretend to compare Glen Urquhart, Glencoe, Glenrosa, "challenge," Roderic Dhu, or the other whiskies exhibited in Class 4, for the task would be impossible without analysis. Messrs. Wilson and Parker have introduced some trace of novelty by marking their whiskies according to age with one, two, or three stars, as is done with brandies.

Very few brewers appear in the present Exhibition. We find on cases in the South Gallery the well-known names of Ind, Coope, and Co., Salt and Co., H. Lovibond and Son, Collier Brothers, and Stansfeld and Co., but Barclay, Meux, Bass, Allsopp, and a large majority of the other great English brewers are unrepresented. We cannot regret their absence, for English brewing and English beer are too well known to require illustration. But the production in England of the German lager beer is still a novelty, and is, moreover, an important industrial achievement. Lager beer is one of the most successful of the many foreign invasions to which in recent times we have been exposed, and considering its lightness and excellence we are glad to find its popularity increasing so rapidly. Until lately the whole of it was imported, but a German company styling itself the Austro-Bavarian Lager Beer Brewery commenced in 1881 at Tottenham the manufacture of several varieties of beers substantially identical with those brewed in Germany. They are all brewed on the German system—that is, the fermentation is carried on at a very low temperature, much of the yeast sinking instead of rising during the process. The four varieties sold are "Tottenham Lager," "Munich," "Bock," and "Pilsen." The last of these is a light table ale, the second and third are akin to porter and stout, but to judge from the analysis submitted to us all have an alcoholic strength not greater than 4½ per cent. by weight. The peculiar flavour, compared by some to garlic and by others to curry, is, we believe, generated in the manufacture, and is liked by those who are used to it. When the beer is intended for exportation or storage, it is "Pasteurised" by exposure to a temperature of 135° F., or thereabouts, after which it will, it is said, keep good in bottle for a twelvemonth. For draught it is aerated by a force pump, which brings it to the tap; and in hot weather it is cooled down to a temperature which renders it very refreshing. The case of Messrs. Gillman and Spencer (No. 157) deserves more than a passing notice on account of the novelty and scientific interest of the manufacture represented in it. This may shortly be described as the gelatinisation of grain for use, with malt, in brewing. Grain of various kinds, but particularly rice, which appears best for

the purpose, is, after decortication, submitted to the action of super-heated steam, whereby the starch is gelatinised and brought into a fit state for the action of diastase. Some curious changes take place, and the diastasic power of the grain itself is said to be increased by the operation, so that it is to a certain extent malted. Before mashing, about 25 per cent. of "gelatinised rice-malt" is mixed with the ordinary malt, after which the brewing operations go on as usual. So far from this addition being an adulteration, it is claimed on definite scientific grounds as an important improvement in brewing, and it has been adopted already by many of the principal brewers. The nitrogenous constituents are present in barley malt in greater quantity than is required for the growth of the yeast cells, and the excess encourages the development of other organisms which spoil the beer. Such organisms are constantly found in malt. It appears, moreover, that the soluble albuminoids of barley malt have increased of late years, so that much difficulty has sometimes been found in getting beer to keep. Now rice contains a smaller proportion of soluble albuminoids than any other grain, and its addition to the mash therefore dilutes, so to speak, the nitrogen, and thus hinders the development of disease germs. Beer brewed on this system ought to keep bright better than other beer, and it is said that it actually does so, and is less likely to disagree with those who drink it.

Since Byron, in "Don Juan," commended the virtues of soda water, an enormous trade in artificially aerated waters has arisen. We suppose the so-called soda water is the most extensively used, but lemonade and the different varieties of ginger beer are also consumed in enormous quantities. We have on various occasions drawn attention to the carelessness with which the manufacture is often carried on, and to the grave risks introduced by the too frequent use of impure water, or of leaden vessels. The best makers now bestow the most studious care on every detail. Some of them employ distilled water, which gives of course absolute security as to organic matter, but which has sometimes a smoky taste somewhat hard to overcome. With a good water-supply, and proper precautions, distilled water is not essential. We find in Class 4 many exhibits of artificial aerated waters. Several of the exhibitors, notably Messrs. Packham and Co. and the Salutaris Company, use distilled water, a fact which we have verified by analysis. Messrs. May, Davis, and Co. use what they describe as purified, or "defecated" water. The last term is by no means a happy one. The manufacture of artificial mineral waters, in which the natural waters of England and the Continent are imitated, has received remarkable development of late. The current belief is that the artificial are inferior in efficiency to the natural waters. We confess that we can see no rational basis for the belief, and without venturing to dogmatise on what is still a moot point, are inclined to think that the observed differences may have arisen from imperfect knowledge and skill in the manufacturer. Many firms exhibit such artificial waters. The British and Foreign Mineral Water Company of Glasgow have sent us samples of several, including the well-known Selters, Vichy, St. Galmier, Hunyadi Janos, Carlsbad, Homburg, and Kissingen, which, in taste at any rate, are good imitations of the natural waters. The same company exhibit specimens of all the chemicals and a model of the tin-lined apparatus used in their manufacture.

Other exhibitors in this department are Messrs. T. Talbot and Co., of Gloucester and Monmouth; Messrs. W. Corry and Co., Belfast; Messrs. Cantrell and Cochrane, of Dublin and Belfast; and Messrs. J. Schweppe and Co., Pitt and Co., and Mr. H. D. Rawlings, of London. Messrs. Schweppe and Co. have a pavilion in the grounds, which at our last visit was unfinished.

PRACTICAL DIETETICS: A CHINESE LUNCHEON.

THE entertainment given on the 3rd inst. by the Chinese Commission to the Executive Council of the Exhibition is worthy of record as a decided novelty. The guests assembled at 1.30 P.M. in a picturesque cool kiosk overlooking the gardens. Decorated latticework, artificial flowers, painting and gilding combined with the soft air that had free access to the dining-room were certainly in striking contrast to the grimy stuffiness of the average London restaurant. Aloft, in a minstrels' gallery, were five Chinamen, pig-tailed, swarthy, and terrible, seated before an assortment of instruments unfamiliar to European eyes: quaint kettle-drums, tom-toms, fiddles of a kind, and bagpipes of a sort, the minstrels resting, plying the fan, and occasionally refreshing the inner minstrel with something from a tea-pot.

The conventional waiters, some German and some English, bustling and perspiring, waiter-like, served as a capital foil to their Celestial colleagues, blue-robed, impassive, spotless, intent on the work of the instant and softly gliding in shoes of white embroidery soled with an inch of felt. The table-gear was European save the chop-sticks and the long-handled spoon which was placed to the right of every guest. Thus housed, attended, and furnished, we opened the attack on the *menu* of some twenty-five items.

Some shreds of gelatine in a saucer were followed by another saucer containing a dab of quaint pickle, highly decorative, piquant, queer, and very mixed. Following some sausage and olives came the first real excitement, "bird's-nest soup," which caused every guest's attention to be intently directed to the contents of the porcelain cup in front of him, and one after another we stooped to sip this greatest of luxuries, when suddenly Bang—whoop—smash—yah! We all started back with thoughts of dynamite. Thank goodness it was but the minstrels who had begun the Chinese national air, the first two lines of which done into English are—

> "Great Son of Heaven, thy glories shine,
> Reflected in thy land divine."

Never were sound and sense more widely apart than in this musical composition. The English paraphrase breathes forth a pious content, a sense of peace, a feeling of calm joy. The music to our ears seemed a mixture of the 5th of November (with an undue number of erratic squibs) and a railway accident; and the thwack of the high-pitched drums went through and through one. Eventually this musical tornado blew itself out, and we returned to the "bird's-nest soup," which proved to be amber-coloured, glutinous, savoury, and decidedly good. The "bird's-nest soup" was followed by a preparation of almonds, which resembled nothing so much as a cup of arrowroot, and a guest near us expressed an opinion that it ought to be eaten with the feet in hot-water and the nose tallowed. After a snippet of sole and an oddment of salmon, each on a quaint little saucer, we were refreshed with hot Shaoshing wine from a teapot. This is the only alcoholic drink in China, and is made from rice. It reminded us of something in the Pharmacopœia, but before we had made up our mind whether that something had emetic, purgative, or expectorant qualities, it was gone. The minstrels now treated us to a chorus with bagpipes, as though intent on inducing stomach-ache by sympathy of sounds and as a prelude to the Timbale *bêche de mer*, a preparation made from the holothuria, or sea-slug. This proved to be very good, and not unlike turtle; and as there is an abundance of holothuria on some parts of our coasts, it is not improbable that we may follow the lead of the Chinese, and that it may some day be found in the English market. We saw the raw material, which was shrunken like dried turtle, but plims prodigiously in the course of cooking. A mouthful of quail, a spoonful of curried mutton (excellent), lotus seeds, sunflower seeds, melon seeds, appropriate music, more hot wine, now followed in quick succession, and then came shark's fin with rice—this dish in colour and taste reminding us of bouillabaisse. Pigeons, punch jelly, quaint biscuits, and sweetmeats now came, and the tom-toms bursting into the familiar strains of "God save the Queen," very creditably performed, told us that the *menu* was accomplished. And so it was, with the exception of the final cup of imperial tea, which is worth eight shillings a pound in Pekin. The leaves at the bottom of the cup were pale in colour and apparently had not been rolled, and we were informed that this tea is sun-dried; the colour was very pale, the aroma most delicious, and the flavour delicate. Thus refreshed and restored, we passed into the Gardens, where a cigar and a concord of sweet sounds assisted the digestion of this strange mixture of Celestial cates.

ROYAL SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS.—The sixtieth annual meeting of this Society was held on the 7th inst. From the report which was read it appears that during last year there were 4618 convictions at the instance of the Society, an increase of 137 on the preceding year, and the accounts showed a balance of £222. The Society's gold medals, given by the Queen, were awarded to Dr. Fleming and Prof. Prichard.

A MEMORIAL TO THE LATE DUKE OF ALBANY.

LORD SHAFTESBURY writes to *The Times*:—"Your columns recently contained a proposal reprinted from THE LANCET that a portion of the new building now being erected for the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, should be made a memorial to the late Duke of Albany, whose interest in the undertaking had been freely manifested. This proposal has been submitted to the Queen, and Her Majesty has been pleased to sanction its adoption. There must be many desirous to do honour to the memory of the esteemed Prince, whose short life was in so large a measure devoted to works of general utility, and in the valuable institution I write of the public sentiment will perceive an enduring memorial, and such as he would have valued most. I have gladly acceded to a request to preside over a meeting in Willis's Rooms on Monday next, the 14th inst., when the Queen's gracious communication will be read and resolutions will be proposed. The cost of the new hospital, which will be about £60,000, exclusive of site, is all provided for but a balance of £12,500, and one of the objects of the meeting is to aid the board in the collection of this sum. The treasurer, the Hon. H. D. Ryder (Messrs. Coutts) or the secretary, at 36, Queen-square, will gladly receive contributions from any willing to help the completion of the important work so advantageously inaugurated by the late Prince, but which can be finished only as a posthumous tribute to his worth."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5554 births and 3279 deaths were registered during the week ending the 5th inst. The annual death-rate in these towns, which had been so low as 18·7 and 19·2 per 1000 in the two preceding weeks, further rose last week to 19·5. During the thirteen weeks of last quarter the death-rate in these towns averaged 20·8 per 1000, against 20·9 and 21·5 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 12·5 in Derby, 13·4 in Brighton, and 14·3 in Bristol. The rates in the other towns ranged upwards to 23·7 in Sunderland, 23·8 in Oldham, 25·6 in Plymouth, and 26·1 in Huddersfield. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 572, and showed a further increase upon the numbers in recent weeks, owing to the greater mortality from diarrhœa; they included 175 from diarrhœa, 126 from measles, 103 from whooping-cough, 61 from scarlet fever, 46 from "fever" (principally enteric), 36 from small-pox, and 25 from diphtheria. No death from any of these diseases was registered last week in Derby, whereas they caused the highest death-rates in Leicester, Liverpool, and Plymouth. The greatest mortality from diarrhœa occurred last week in Preston, Plymouth, and Leicester; from measles in Blackburn, Liverpool, Plymouth, and Wolverhampton; from whooping-cough in Leicester and Sunderland; and from scarlet fever in Cardiff and Sheffield. Of the 25 deaths from diphtheria in the twenty-eight towns 15 occurred in London, 3 in Portsmouth, and 2 both in Bristol and in Liverpool. Small-pox caused 34 deaths in London and its outer ring of suburban districts, exclusive of 11 London cases registered in the metropolitan asylum hospitals situated outside Registration London; also 3 in Liverpool, 2 in Sheffield, and 1 in Hull. The number of small-pox patients in the metropolitan asylum hospitals, situated in and around London, which had been 1316 and 1290 on the two preceding Saturdays, again rose to 1368 at the end of last week; the number of new cases admitted to these hospitals, which had been 354 and 260 in the two previous weeks, were 266 last week. The Highgate Small-pox Hospital contained 81 patients on Saturday last, against 90 and 83 on the two previous Saturdays; the new cases admitted were 20 last week, against 22 and 11 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the nine preceding weeks from 360 to 218, rose last week to 231, and exceeded the corrected weekly average by 30. The causes of 71, or 2·5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Birmingham, Bristol, Portsmouth, Salford, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Birkenhead, Oldham, Bradford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 23·3 to 20·6 per 1000, rose to 21·8 during the week ending the 5th inst., and exceeded by 2·3 per 1000 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 12·9 and 15·1 in Greenock and Perth, to 23·2 in Dundee and Paisley, and 25·8 in Glasgow. The 526 deaths in the eight towns included 32 which were referred to whooping-cough, 13 to diarrhœal diseases, 10 to measles, 10 to diphtheria, 7 to "fever," 6 to scarlet fever, and not one to small-pox; in all 78 deaths resulted from these principal zymotic diseases, against 83 and 86 in the two preceding weeks. These 78 deaths were equal to an annual rate of 3·2 per 1000, which was slightly below the mean rate from the same diseases in the twenty-eight English towns. The 32 deaths from whooping-cough corresponded with the number in the previous week, and included 22 in Glasgow and 6 in Edinburgh. The 13 fatal cases of diarrhœa slightly exceeded the low number in the corresponding week of last year. The deaths from measles, which had been 14 and 15 in the two preceding weeks, declined to 10, of which 6 occurred in Glasgow. The 10 fatal cases of diphtheria exceeded the numbers in recent weeks, and included 5 in Glasgow, 2 in Dundee, and 2 in Edinburgh. The 7 deaths from "fever" showed a decline of 3 from the number in the preceding week, 4 were returned in Edinburgh, and 2 in Glasgow, where 4 of the 6 deaths from scarlet fever were also recorded. The deaths referred to acute diseases of the respiratory organs in the eight towns, which in the two previous weeks had been 74 and 85, were last week 83, and were considerably below the number returned in the corresponding week of last year. The causes of 104, or nearly 20 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 21·7, 27·1, and 28·2 per 1000 in the three preceding weeks, declined to 21·0 in the week ending the 5th inst. During the thirteen weeks of last quarter the death-rate in the city averaged 26·5 per 1000, whereas the rate during the same period did not exceed 19·9 in London and 21·6 in Edinburgh. The 141 deaths in Dublin last week showed a decline of no fewer than 49 upon the number in the previous week; they included 18 that were referred to the principal zymotic diseases, against 10, 15, and 14 in the three preceding weeks; 10 resulted from scarlet fever, 3 from diarrhœa, 2 from diphtheria, 2 from "fever" (typhus, enteric, or simple), 1 from whooping-cough, and not one either from small-pox or measles. These 18 deaths were equal to an annual rate of 2·7 per 1000, the rate from the same diseases being 4·0 in London and 3·6 in Edinburgh. The 10 deaths from scarlet fever in Dublin last week showed a marked increase upon the numbers returned in recent weeks, while those from "fever" were fewer than in any recent week. The 3 deaths attributed to diarrhœa corresponded with the number in the previous week. Three inquest cases were registered, and only one death resulted from violence; 49 deaths were recorded in public institutions. The deaths both of infants and of elderly persons showed a marked decline from the numbers returned in previous weeks. The causes of 14, or 10 per cent., of the deaths registered during the week were not certified.

MISS WARDELL'S CONVALESCENT HOME FOR SCARLET FEVER.—The Princess of Wales, the Patroness, has consented to open the Home at Brockley Hill, Stanmore, on Monday July 14th. A sale of work will be held at the Home on the day of the opening and following days.

Correspondence.

"Audi alteram partem."

"THE PATENT MEDICINES STAMP ACT."

To the Editor of THE LANCET.

SIR,—In your leading article contained in the issue of July 5th you animadvert upon the present condition of the law which regulates the sale of patent medicines. Now this subject is one of such paramount importance, alike to the profession at large and to the public, that I may be pardoned for bringing forward some other aspects involved in the existing state of affairs. You mention that the Act of 1812, which by the way was passed to enlarge and amend a former statute, is still the guide and mentor for the authorities at Somerset House. In the schedule appended to this Act is a long list of nostrums, many of which are now simply names, while the ruck of the present patent medicines come under the Act by virtue of the words that any preparation is "held out or recommended to the public," by advertisement or otherwise, "as nostrums or proprietary medicines, or as specifics, or as beneficial to the prevention, cure, or relief of any distemper, malady, ailment, disorder, or complaint." And further, this Act, which you stigmatise as peculiar and incomprehensible, includes among its scheduled articles "foreign medicines of all kinds, except drugs." But the Act was passed eleven years before that eventful Oct. 5th, when No. 1 of THE LANCET appeared, and at a time when pharmacy was primitive, if not savage, and the profession were more apt at phlebotomising than conversant with the study of the physiological action of drugs. During the past three-quarters of a century this Act has lain in the limitless limbo of unintelligible statutes passed for the guidance of the people and the pecuniary aggrandisement of the lawyers; but at the present time the whole reading, scope, and, I think we may say, purport, of the Act have been altered, its spirit quashed, and its letter raised into what may prove a most disastrous prominence. When we consider the reckless and unreasoning way in which the authorities have unearthed and contorted an effete enactment such as the Stamp Act of 1812, we may well review the situation and ask how long shall such things be? You, Sir, have drawn attention to the fact that, according to the modern interpretation of the Act, it has taken upon itself the form and semblance of an impudent "puff," whereof the patent medicine mongers have not been slow to avail themselves. But another issue has yet to be considered. As it would appear, Her Majesty's Commissioners possess a wide discretionary power in the matter of selecting what constitutes a "specific" or a drug; and even the seemingly simple problem, "What is a foreign medicine?" admits, according to Her Majesty's Commissioners, of many and startling solutions. It is to the manifest injustice, and we may add, in Carlyle's English, "unreason," of this discretionary power indiscreetly administered that I wish to draw attention. Not only are the principles of free trade glaringly violated and protective policy flaunted, but medicines which are undoubtedly proprietary are privileged; while similar compounds, because they emanate from foreign warehouses, and are pushed with the vigour which characterises the manufacturing chemist of to-day, are condemned to pay toll. The Commissioners are strictly within their legal right when they assert that their province lies, not in rectifying a stupid and effete law, but in carrying the same into effect. When, however, such wide discretionary power is left in their hands, it is strange that they take no pains to ascertain whether their proceedings are in harmony with the knowledge or accepted usage of the day. To be gravely told that sulphate of quinine cannot be said to be a drug, as it is compounded of sulphuric acid and quinine, inclines one to push inquiry further, and to seek an example of a simple substance. We are told that a drug made up with a common vehicle into a suppository becomes a medicine which must be stamped. A well-known nostrum prescribed for asthma, proprietary to the ninetieth degree, escapes, because it "is neither a medicine taken internally nor applied externally." A princely fortune has been amassed by the proprietor of an agreeable laxative salt sold in powder; but this is not a patent medicine, we are told, and so eludes Her Majesty's Commissioners, because it is, so they tell us, a natural effervescing water.

I have cited a few examples out of a host, because such flagrant misdirection alike of common sense and justice must show the utter futility of anything short of a repeal of the law as it now stands and is now enacted. Let us glance at the upshot of the measures the Inland Revenue Commissioners are proposing: All medicines which have enjoyed a printed reputation in the treatment of any particular disease—for example, digitalis in disease of the mitral orifice,—all alkaloids, and practically all the less common remedies (seeing they are mostly imported) will become liable to be stamped; they will then be regarded by the intelligent British public as safe additions to the family medicine chest, and glonoin capsules will be as glibly spoken of and as disastrously used as are the present opium-dosed "soothing syrups" or "teething powders." Prescribing must cease, or be replaced by a *memoria technica* well stored with the names and addresses of those chemists who import or prepare the various alkaloids and preparations of an extra pharmacopœia. From whatever standpoint this matter is viewed it seems big with disaster, and fruitful of injustice and inconvenience.

I am, Sir, your obedient servant,

Gower-street, W., July, 1884. DUDLEY W. BUXTON, M.D.

To the Editor of THE LANCET.

SIR,—In reference to the question of the stamp duties on patent medicines, some interesting comparisons arise with respect to the custom in other countries and their consequences. In France, for instance, there is no tax of any kind on nostrums or proprietary medicines; the law carefully avoids doing anything which can be construed to authorise or approve of their sale; indeed, nostrums as such are absolutely forbidden until, by an analysis conducted by a state official, it can be shown that they contain nothing which might prove dangerous in the hands of the most inexperienced. The regulations relating to the sale of poisons in France are very strict, and the law prohibits, except under an order from a doctor, the sale of any medicine, proprietary or not, which contains other than harmless drugs. The result is materially to lessen the risk of the imprudent employment of potent remedies, while great difficulties are placed in the way of individuals disposed to indulge a morbid taste for narcotics, whether in the form of opium, morphia, or chloral. In England, apart from the extraordinary facilities afforded for the sale of these substances, the myriad quack mixtures offer a ready loophole of escape, both morally and legally, to those who desire to employ drugs, the use of which, except under medical advice, is fraught with so much risk and danger.

The stamp in England lends itself admirably, or disastrously, to the purposes of advertisement. I have before me a large collection of such advertisements, marvels of ingenuity in their way, where the stamp is made to convey the impression—and this in no ambiguous terms—that Her Majesty's Government have examined the medicine enclosed, and certify not only to its genuineness, but also that it possesses the qualities which the proprietor of the medicine has thought fit to ascribe to his compound. This is no fictitious—still less a factitious—objection. The plausible manner in which these advertisements are worded is calculated to mislead all but those who are in a position to appreciate their value, and it is a fact familiar to most of us that people attach much the same importance to the stamp as they would to the Hall mark on silver plate. That the fictitious importance so conferred—a thing, by the way, which excites a good deal of ridicule abroad—is beneficial to the proprietors of these preparations is evidenced by the fact that they are strongly opposed to the abolition of the tax; nor, indeed, is this to be wondered at, as the cost does not fall on their shoulders, and the benefit to them is only too apparent.

It is most desirable that a tax so hurtful in its effects should be at once abolished, and that henceforth, or until further legislation on the sale of poisons stops their unauthorised and indiscriminate use altogether, they will be left to rely for prestige on the specious wording of their vendors, and cease to be invested with the halo of State recognition. I am, Sir, your obedient servant,

ALFRED S. GUBB.

Westminster Hospital, Broad Sanctuary, S.W., July, 1884.

FURTHER DISCOVERY OF ROMAN REMAINS IN LINCOLN.

To the Editor of THE LANCET.

SIR,—Permit me to supplement the letter on the discovery of Roman remains in Lincoln published in THE LANCET of June 14th.

The workmen, a few days ago, whilst extending the digging out of the foundations of the old house at the angle formed by Bailgate and Eastgate preparatory to the building of a new one, came upon a quaint-looking Roman arch, six or eight feet north-east of the sarcophagus or small chamber in which, as stated in my former letter, the ten urns were discovered. This arch or door-way, which had necessarily to be removed, formed a right angle with the sarcophagus, and was about six feet high and two feet wide. Like the large Roman arch at the upper or northern end of Bailgate, it had no keystone, the formation of all the stones in the arch obviating the necessity for one. Leading from the door of the sarcophagus to the arch was a semicircular path made of concrete. This path, after passing through the arch, dipped down two feet and a half to make the floor of a small room five feet square and seven feet high.

On Thursday morning, the 26th inst., the workmen, whilst in the act of taking down the arch, discovered a large urn, and on clearing away the rubbish out of the room found three or four more urns of large size. The urns previously discovered in the sarcophagus held from two to three quarts of fluid; those recently discovered, before they were damaged, would have held as many gallons. They were embedded in lime, had no lids, and all contained ashes of the dead, the ashes being covered over with charcoal. The small room in which these urns were found smelt most offensively, and on washing a fragment of one of the urns, a most disagreeable odour arising from the fragment was complained of. Putting the pieces of one of the urns together, I could see that it was somewhat globular in shape, with a large mouth, the rim of the mouth being neatly and elegantly curved outward to the extent of nearly two inches. The colour of the urn examined is black, and it is a good, although a coarse, specimen of the old Roman ware called "Upchurch." The fragments of this urn presented an appearance which leads me to believe that the vessel was twice "fired." It is therefore probable that after the dead had been burned in the ordinary way the remains were collected, placed in this large urn, and it and its contents were again subjected to the fire of the crematorium.

Mr. Hibbitt, the intelligent foreman of the works, is of opinion that the arch and the room recently discovered are of much older date than the sarcophagus and apartments previously discovered. Over these old Roman buildings a Norman edifice of some kind had been erected, and Mr. Hibbitt pointed out the differences between them. The building of the Romans was "splendid," and the workmen with difficulty pulled down the old walls. The building of the Normans was as different as possible. They made the "faces" of the walls even and smooth but the spaces between the faces they filled up with rubbish of any kind that came to hand, consequently their work fell to pieces when struck by the workmen.

The crematorium and the other buildings devoted to the final disposal of the dead seem to have stood in a north-westerly angle of an enclosure or outer courtyard, and this courtyard in all probability belonged to the beautiful villa discovered a year or two ago. The villa stood on one of the finest sites in the city, and was situated only fifty yards directly in front of and southward of the crematorium buildings. Although this place of sepulture may have been owned by successive Roman governors, still it does not appear to have been held sufficiently sacred to be isolated from the busy world about it. Not more than twelve or fourteen yards from it eastward was found, firmly and well puddled in the earth, a nine- or ten-gallon water-jar for the use of animals to drink from, and a neat drain was also found to convey away the water overflow of the jar. Still nearer to the sepulture buildings was a well in the centre of a large flat stone, four feet square, and well worn by the feet of those who went thither to draw water. Scattered about were large square tiles, having one side of the square curved round, as if intended to hold something. A packing-needle, of fine brass wire, was found with thread wound around it, and also a handsomely made leaden box, resembling very much the old-fashioned poor-box, with long shaft handle. The handle in this case was wanting, but the tapering socket is there, supported by neat brackets. In still closer proximity to the buildings was the ashbin, among the rubbish of which were found numerous oyster shells and broken pottery, sufficient to demonstrate that breakages occurred in those days as well as in these. I found the lower part of a flower-pot of Samian ware, having a hole in the bottom for the escape and admission of water in the same way as a flower-pot of the present day. The inverted saucer-like lid for vessels seemed to be very fashionable in those times. The Chelsea people and Orientals made similar lids for sugar-basins. I saw the spout of a jug of Castor ware of the same shape as some of the beautiful Dresden milk-jugs.

I am, Sir, very truly yours,

Lincoln, June 28th, 1884. WILLIAM O'NEILL, M.D.

"VACCINATION IN THE METROPOLIS."

To the Editor of THE LANCET.

SIR,—Under the above heading in last Saturday's LANCET you publish an article stating that the proposal which I made in the House of Commons the other day for the prevention of small-pox in the metropolis was, as you understood it, "to transfer from the boards of guardians to the thirty-nine sanitary authorities the administration of the Vaccination Acts." Permit me to say that I never suggested any such thing. Further on you add that I "demanded a more general use of lymph from the calf." That also is an entire mistake. What I advocated was a slight modification of existing machinery, which might be secured almost without legislation, and which would secure the prompt disinfection and revaccination of infected households as well as the prompt isolation of small-pox patients. The principles of the system I advocated have in Glasgow, where there is no calf lymph, reduced the death-rate from small-pox to less than one-fiftieth of what it stood at before that system was adopted, and to less than one-twenty-fifth of the present death-rate in the healthiest districts of London. As I showed, they could be adopted here without the slightest dislocation of existing machinery, and probably when the recrudescence of the epidemic next year has sufficiently aroused public indignation, the obvious administrative improvements which I suggested will be adopted. Till then I must console myself with the reflection that I have done all I could to avert any needless addition to the thousands of lives which in the metropolis have within the last ten years been deliberately sacrificed at the altar of Small-pox by the High Priest of Red-tape. I am, Sir, yours truly,

House of Commons, July 9th, 1884. CHARLES CAMERON.

DIAGNOSIS OF SMALL-POX.

To the Editor of THE LANCET.

SIR,—It is not very surprising that errors are not infrequently made in the diagnosis of small-pox, as it is a disease which rarely comes under the observation of general medical practitioners, except during epidemics, and is even then confined to certain localities to a great extent; but with care, and a knowledge of the medical literature on the subject, so far as it can be acquired without much difficulty or expenditure of time, serious errors may be avoided. However, a case illustrative of the grave consequences of a mistake in diagnosis has come under my notice, and I think it is of a nature worth the attention of medical men, especially while small-pox is rife in London. The facts as described by one of the family are these. The father was taken ill and died after a short illness, the immediate cause of death being hæmorrhage from one of the mucous tracts. There was no apparent small-pox eruption of the usual character, but very extensive petechial or hæmorrhagic colouration of the skin, described as "purple," lividity around the eyes, on the forehead, &c.—in fact, the characters of a severe case of hæmorrhagic small-pox. Seemingly the diagnosis was simple purpura, as the family were assured that there was nothing infectious. However, first two of the children, then the wife, and lastly a third member of his family, were attacked with small-pox, without any apparent history of infection from without, but fortunately in them the disease was of a milder type. If the diagnosis

had been correctly made in time, the spread of the disease might have been checked with the case of the father, as it was almost, if not quite, a fortnight before it showed itself in the other members of the family.

I am, Sir, yours obediently,

JAMES A. PHILIP,

July, 1884. Medical Officer, *Red Cross* Ambulance Steamer.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

CASE OF GASTROSTOMY.

I SAW to-day in the wards of the Newcastle Infirmary an interesting case in which the operation of gastrostomy had been successfully performed by Mr. Page. The patient was a stonemason, about forty-six years of age, and, except for being a heavy drinker, there was nothing to point to as a cause for the symptoms of dysphagia, which came on gradually, but became very urgent about the beginning of the present year. It is nearly a month since he was admitted to the infirmary, and fully three weeks since the operation. Mr. Page made an incision through the rectus muscle on the left side, and to this the stomach was secured by wire sutures, and opened three days later, the patient in the meantime being sustained by nutrient enemata and hypodermic injections. When the gastric fistula was fully formed he was fed through an elastic tube, and at the present time, although he is still being fed by the tube, he has recovered some power in swallowing, and has increased in weight four pounds since the operation. At the time of the operation he was harassed by a hectic cough, and this somewhat induced Mr. Page to make his opening through the rectum, the structure of the muscle acting in a valvular manner, and so preventing expulsion of the contents of the stomach during the act of coughing. The presence of the tube appeared to give the patient, who was able to walk about the ward, very little trouble. The case is doing well.

THE DWELLINGS OF THE POOR.

A conference convened by the Bishop of Durham has been held this week in Bishop Cosin's library, Palace-green, Durham, this week, having for its object the condition of the dwellings of the poor in the county of Durham. The meeting was a representative one, attended by medical officers of health and other members of our profession taking a direct interest in sanitation. A general sanitary aid committee was formed at the meeting.

REMARKABLE CASE OF EXCESSIVE DRINKING.

An inquest was held yesterday at Middleton, near Darlington, in which it was shown that a lady had died from excessive drinking, inducing epileptic convulsions, in one of which seizures she would appear to have been suffocated in her chair. From the evidence given, it was clear that she had been addicted to excessive drinking for about three years, and during that time she had drunk from two to three pints of whisky daily.

THE COPENHAGEN CONGRESS.

It might be mentioned, in view of the approaching meeting in the Danish capital, that one of our leading shipping firms here has notified its willingness to take all members of the profession from Newcastle quay to Copenhagen and back for the extremely low sum of thirty shillings. I hear on all sides of active preparations for the journey, although some are bent on crossing St. George's Channel as well as the Cattegat.

ACCIDENT TO DR. HEATH.

I regret to say that Dr. Heath, of our city, met with a serious accident yesterday while driving with a female patient and nurse in the neighbourhood of Chester-le-street. The horses bolted, the vehicle was upset, and the occupants were violently thrown out; Dr. Heath has several ribs fractured, while the females are also seriously injured.

Newcastle-on-Tyne, July 1st, 1884.

THE managing committee of the Warneford Hospital at Leamington have appointed Miss E. M. Swain, daughter of Professor Swain, of Queen's College, Birmingham, resident dispenser to the hospital.

PARIS.

(From our Paris Correspondent.)

THE CHOLERA EPIDEMIC.

THE meeting of the Academy of Medicine yesterday was looked forward to with great interest, as it was anticipated that Dr. Fauvel, in the face of evidence against him, would have made another declaration tending to modify that which he first made—namely, that the epidemic at Toulon was none other than sporadic cholera. Warm discussions would necessarily have followed; but Dr. Fauvel, acting on the wise adage, "a good retreat is better than a bad fight," made himself scarce, and instead of attending the meeting to defend his cause in person, he addressed a letter to the President of the Academy excusing himself, as from the shattered state of his health from over mental work, he was obliged to go to the country for at least a month to seek that rest which he could not obtain if he remained in Paris. In his letter, however, he still adheres with great tenacity to his former opinion, and states that, by whatever name the epidemic may be qualified, it is none other than the "cholera nostras," that is to say, engendered at Toulon, it will become extinct without extending beyond its present seat, where it will be so concentrated as to become the starting-point for an epidemic which will invade all France. There seems some contradiction in this assertion, but I give it as it appeared in Dr. Fauvel's published letter. Dr. Fauvel further states that the stray cases, more or less choleraic, and more or less numerous, met with at Marseilles will be extinguished with the end of the great heat, without having given rise to a veritable epidemic of Asiatic cholera. Dr. Rochard, who had just returned from Toulon, made his appearance at the Academy, and protested in rather strong terms against the assertions of Dr. Fauvel. I need not trouble your readers with his arguments, as he simply goes over the old ground. At the same time, he endeavours to prove that the present epidemic, which according to him is of the true Asiatic type, was not imported by the French ships coming from the East, but insinuates that the disease was brought over the Red Sea, which of course means that the English were the guilty party. Dr. Rochard then made some remarks on the treatment employed by medical men at Toulon. After having tried various remedies, the following is that now adopted. Hypodermic injections of ether in the stage of prostration, and atropine, also used hypodermically, to relieve the pain and cramps attending these cases. The inhalations of oxygen, which you have already referred to, have, according to Dr. Rochard, been attended with such favourable results as to encourage perseverance in them, particularly when the patients are plunged into a profound state of coma. Dr. Rochard observes that, whatever the treatment, the number of cases has been extraordinarily great, particularly in the navy, where the proportion of deaths was only one in five cases. As preventives, the principal remedies consist in sanitary measures, such as segregating the inhabitants, and thus preventing the crowded state of the town; with these measures the place should be thoroughly cleansed and disinfected; but he deprecates the ridiculous extent to which disinfection is being carried out, much to the annoyance of travellers, who are put to inconvenience by the unnecessary detention they are subjected to, and which, as Dr. Rochard himself admits, is perfectly ineffective. Dr. Koch, who is now at Toulon, where, it is said, he met with cold politeness by the medical staff of the hospitals, is now at work with his two young French colleagues of the cholera mission to Egypt, Drs. Strauss and Roux, who gave him a friendly reception, and it is to be hoped we shall soon know the result of their investigations. Meanwhile, Dr. Koch has declared that the disease before him is clearly Asiatic cholera. He does not believe that the germs are transported by the air, adding that the microbes are not transmissible, but by the human body, by the dejections, or by the wet linen containing these dejections. He is of opinion that after a few days, about eight, the infected linen does not contain any more dangerous microbes. In accord with the greater number of hygienists, he has no faith in simple external fumigations. A few stray cases have occurred in the provinces near Toulon, but with one or two exceptions they have turned out to be false alarms. The same thing happens daily in

BEST COPY AVAILABLE

Paris, and with the same results. Meanwhile, every precaution is being taken to prevent the incursion of the disease.

FRENCH JURORS AT THE INTERNATIONAL HEALTH EXHIBITION.

The following gentlemen have been designated to represent France among the jury of the International Exhibition of Hygiene now being held in London:—Professor Arnoult of Lille, Professor Brouardel, Dr. Gariel, Dr. Henry Guéneau de Mussy, Professor Lavet of Bordeaux, Dr. Lionville Deputy, Dr. Napias, Dr. Proust, and Dr. Vallin.

Paris, July 9th, 1884.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—We understand that *thirty* appointments are offered for competition at the examination in August next instead of *nineteen*, as previously advertised.

Surgeon-Major Augustus Frederick Elliot, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon Herbert Cotton has been placed upon temporary half-pay on account of ill-health.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon William J. Eames, to the *President*, additional, for temporary service at the Royal Victoria Yard; Surgeon Robert G. Bird to the *Achilles;* Surgeon John O'Callaghan, to the *Tyne;* Surgeon George W. F. Armstrong, to the *Belleisle.*

ARTILLERY VOLUNTEERS.—1st London (City of London): John Joseph Ardavon Vincent Constantine Raye, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS.—2nd Shropshire: Acting Surgeon John Lyon resigns his appointment.

ROYAL COLLEGE OF SURGEONS.

AT a quarterly meeting of the Council, held last Thursday, the five newly elected members took their seats—namely, Messrs. T. Smith, George Lawson, A. E. Durham, Berkeley Hill, and W. Allingham. Mr. Cooper Forster was elected President of the College for the ensuing year, in the place of Mr. Marshall; and Messrs. Savory and Holmes were elected senior and junior Vice-Presidents respectively. In accepting the office of junior Vice-President, Mr. Holmes stated that he wished it to be understood that he did not intend to accept the office of President, as he disapproved of the present system of election by rotation. Mr. C. Stewart was formally admitted Conservator of the museum. The various committees were appointed, and the several professors and lecturers were elected. Messrs. Lund and Wood were elected Professors of Surgery and Pathology, and Messrs. Parker, Brailey, Stewart, Treves, and A. Hill Professors of Comparative Anatomy and Physiology. Mr. Schäfer was re-elected Lecturer on Anatomy and Physiology, and Mr. Chas. Stewart the Erasmus Wilson Lecturer. The first part of Sir Spencer Wells's motion—"That all confirmed resolutions of the Council be considered as in force until they have been formally rescinded"—was not carried; and the latter part—"That any existing resolutions which are not binding on the Council be rescinded"—was by leave withdrawn. Sir Erasmus Wilson was nominated as a recipient of the honorary medal of the College, the ballot for which will take place at the next meeting of the Council.

THE MEDICAL ACT AMENDMENT BILL.

AT the time of going to press on Friday morning the Bill had not been reached, but is still on the list. Should there be no serious opposition, it is sure to pass; otherwise there is not the slightest chance of its becoming law this session. If, however, the passing of the Bill is to be obtained only at the expense of the adoption of Sir Lyon Playfair's amendment, we shall hardly be disappointed at the latter contingency, for that amendment would have so seriously detracted from the value of the measure as to make it of comparatively little worth.

MEDICAL NOTES IN PARLIAMENT.

Sanitation in Clerkenwell.

THE President of the Local Government Board, in his speech on the second reading of the London Government Bill on Friday night in the House of Commons, declared that the insanitary condition of the parish of Clerkenwell rendered that district "a danger and a disgrace to the whole of the metropolis," and that the vestry which allowed it to remain in that condition was unfit to exercise the powers entrusted to it.

The Thames.

The Chairman of the Metropolitan Board of Works on Monday admitted to Mr. D. Grant that the state of the Thames at East Greenwich, in the neighbourhood of the sewage outfall, was offensive and dangerous to the public health. He said directions had been given for the liberal use of deodorising agents, but the difficulty had mainly arisen through the dry weather, there being but a small flow of upland water. Special instructions had been issued to the Board's engineer, who had full authority to take whatever measures were possible to mitigate the nuisance.

On Tuesday, in the debate on the London Government Bill, Mr. Boord, one of the members for Greenwich, reverted to the subject by way of complaint of the inefficiency of the Metropolitan Board.

Covent-garden.

Sir J. Hogg, in reply to Sir F. Milner on Monday, repudiated any responsibility on the part of the Metropolitan Board with regard to the foul condition of the streets in the neighbourhood of Covent-garden, but stated that he had called the attention of the Strand District Board to the matter.

The London Sewerage System.

On Tuesday, Mr. Russell informed Mr. Gourley that the Local Government Board had no legal control over the cleansing and flushing of the metropolitan sewers, which were under the jurisdiction of the local authorities.

The Cholera.

Replying to Mr. Gray, answers were respectively given by Mr. Russell and by Mr. Trevelyan to the effect that the necessity had not yet arisen for issuing special regulations under the Public Health Act, in view of the importation of cholera into England and Ireland. The sanitary authorities already possessed very large powers, and the exceptional provisions of Section 134 would be applied directly it became evident that this country was really threatened with the disease.

The Medical Bill.

During the week about a hundred petitions from various places throughout the kingdom have been presented in favour of Mr. Sclater Booth's amendment for the appointment of a Pharmacopœia Committee.

On Thursday evening, in making a general statement as to the course proposed to be taken by the Government, Mr. Gladstone said: "With regard to the Medical Act Amendment Bill, I do not give a final judgment, and upon this ground. In the first place, my noble friend the Lord President of the Council, and my right hon. friend the Vice-President, are, I believe, of opinion that they have very nearly arranged the principal contested points connected with the Bill. A short time would test that. It is also a Bill which has made considerable progress. It is now in Committee, with the mark of 'Progress' attached to it; and without interfering with the course of business, it is a Bill upon which we may easily ascertain at a later hour of the evening whether the House will proceed with it."

Vaccination.

In reply to Mr. Hopwood, Mr. Mundella stated that the Education Department had no power to sanction the examination of scholars in Board Schools for the purpose of ascertaining whether they had been vaccinated. The visit of some person (presumed to be in the employ of the local authorities of St. Pancras) on Wednesday last to the Henry-street School for this purpose had therefore not received the sanction of the department.

The Patent Medicines Bill.

Mr. Mundella replied to Mr. Warton that the Irish Government had not yet communicated their decision as to whether Ireland should be included in this measure, the fate of which was now dependent upon a higher authority than his. A good many things had happened since March 22nd, and possibly there were good reasons why the Bill had not been proceeded with.

A Parliamentary Nuisance.

In reply to Mr. James Lowther, Mr. Shaw Lefevre said he had received complaints from hon. members of a very offensive odour in the House of Commons, but he was satisfied it was not caused by any defect in the ventilating arrangements of the House. It proceeded from some outside cause, which he believed to be the Victoria-street sewer; but he would have no objection to a small committee investigating the matter. He had communicated with the Metropolitan Board on the subject.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 4th, 7th, 8th, and 9th inst.:—

Hugh A. Clarke, Liverpool; Edward E. Barret and H. G. Tandy, Charing-cross Hospital; Rupert W. Clayton and S. G. Vinter, St. Mary's Hospital; William S. Whitehead, Arthur B. Stevens, A. E. Gresham, and H. E. Whitehead, St. Bartholomew's Hospital; Robert H. M. Roberts, St. Thomas's Hospital; Bertie S. Johnson and Walter R. Garrould, University College; Henry T. Kelsall, G. E. Haslip, Charles E. Soudamore, Horace A. Debenham, Harold E. Owen, R. Hitchings, and J. F. Vincent, London Hospital; C. H. West, G. A. Wyboum, E. F. Gardner, C. A. Lumley, and S. Woodhams, Guy's Hospital; G. McNair, King's College; John E. Appleton, St. Mary's Hospital; Richard H. Williams, A. B. Kingsford, W. C. Carter, F. P. Kitson, W. J. Gilpin, and R. B. Hughes, University College; G. T. Giddings, C. Collier, J. T. C. Williams, and A. E. Kempthorne, London Hospital; J. E. Nihill, C. Lyddon, and C. H. Ashford, St. Bartholomew's Hospital; T. G. Scott and F. T. Frost, Guy's Hospital; E. E. Dalton, Charing-cross Hospital; E. M. Calendar, St. Mary's Hospital.

ROYAL UNIVERSITY OF IRELAND.—The following degrees and diplomas were conferred last week:—

DOCTOR IN MEDICINE.—Henry Anderson, Robert Bell, J. C. S. Burkitt, Howard Carr, Jacob Fairbrother, John S. Fogerty, John D. Kenny, Michael O'Brien, Leonard Redmond, R. H. Sproule.
BACHELOR IN MEDICINE.—Patrick A. Daly.
MASTER IN SURGERY.—Robert Bell, J. J. Brownlee, J. C. S. Burkitt, Howard Carr, John S. Fogerty, James C. Hood, E. J. W. Johnston, Alexander Lindsay, Robert McElwaine, Archibald P. B. Moore, Michael O'Brien, Richard M. Ralph, Leonard Redmond, R. H. Sproule, James Torrens, Samuel Wallace.
DIPLOMA IN OBSTETRICS.—James C. Hood, James F. Hunter, Alexander Lindsay, Samuel Wallace, Patrick B. White.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on July 3rd:—

Dundas, Mordaunt George, St. Thomas's-street.
Larkin Frederick Charles, Radcliffe-street, Everton, Liverpool.
Maggs, W. Adolphus, Hanover-square.
Peake, Solomon, Coventry.
Raghib, Edmund, Park-road, Wandsworth.
Williams, Edward Lloyd, James-street, Buckingham-gate.
Williams, Robert Richard, Llanberis, North Wales.

The following gentleman also on the same day passed the Primary Professional Examination:—

Burd, George Frederick, St. Bartholomew's Hospital.

MEDICAL MAGISTRATES.—Dr. W. T. Colby and Mr. Joshua Hartley, M.R.C.S., both of Malton, have been placed on the Commission of the Peace for the North Riding of Yorkshire.

MR. WALTER A. EMSLIE, M.B., C.M., has been chosen by the Free Church Assembly of Scotland as their medical missionary at Livingstonia, and he will shortly take his departure to that station.

ON the 5th inst., the foundation stone was laid of a coffee tavern, reading room, and workmen's dwellings which are being erected in connexion with the works and at the sole cost of Messrs. Chubb and Son in Old Kent-road. When the building is completed and fitted, it will be handed over to a committee of workmen, in order that the latter may themselves manage the whole affair.

THE sanitary authorities of Wolverhampton and South Staffordshire have decided not to accept the scheme of the local Drainage Commission for the drainage of the entire district for £250,000.

DR. MANSON (Banff) and Dr. Davidson (Wartle) were last week, in celebration of their jubilee as medical practitioners, invited to a banquet by the members of the medical profession in Aberdeenshire and neighbouring counties.

AT the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on the 8th inst., Sir W. N. E. Smart, K.C.B., M.D., Inspector-General, in the chair, the sum of £70 was distributed among the several applicants.

THE last sessional meeting of the Western Microscopical Club was held on Monday, the 7th inst., at the residence of Dr. Danford Thomas, the coroner for Central Middlesex. A large and fashionable gathering assembled at a garden party given on the occasion. The band of the 18th Middlesex Regiment was in attendance. The whole affair was a great success.

THE STATE OF THE THAMES.—The attention of the Metropolitan Board of Works, the Thames Conservancy, the City of London Port Authorities, and the Royal Commission of Thames Drainage has been drawn to the present foul state of the river, and it has been proposed as a temporary expedient to deodorise the sewage at the two great outfalls in Barking Reach.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.—At the next annual meeting, to be held in St. Louis on Oct. 14th, 15th, 16th, and 17th, the following topics will be presented for consideration:—1. The Hygiene of the Habitations of the Poor. 2. The Hygiene of Occupations. 3. School Hygiene. 4. The Adulteration of Food. 5. Water Pollution. 6. The Disposal of Sewage by Irrigation and by Chemical Action. 7. The observable Effect upon Public Health of Official Sanitary Supervision. 8. The Work of Municipal and State Boards of Health.

NEW DWELLINGS FOR THE WORKING CLASSES.—On the 8th inst. the Prince and Princess of Wales opened in the crowded neighbourhood of Newport Market, Cranbourn-street, near Upper St. Martin's-lane, in the eastern part of St. Anne's, Soho, a new pile of buildings erected for the accommodation of the industrial classes. The block will lodge 257 families, or about 1250 persons. At the close of the opening ceremony a presentation of silver plate and other articles was made to Sir Sydney Waterlow and his co-directors of the company by which the building has been undertaken.

FORFARSHIRE MEDICAL ASSOCIATION.—The twenty-sixth annual meeting of this Association was held on the 3rd inst., when the following were elected office bearers for the ensuing year:—President, Dr. Keith Anderson, Arbroath; Vice-Presidents, Dr. Dewar, Arbroath, and Dr. Miller, Dundee; Secretary, Dr. Sinclair, Dundee; Treasurer, Dr. Macleod, Dundee. Council: Dr. Watson-Wemyss, Broughty Ferry; and Drs. Duncan, MacEwan, Bain, Johnston, and Templeman, Dundee. Local Secretaries were appointed as follows:—Dr. Dewar, Arbroath; Dr. Lawrence, Montrose; Dr. Mackie, jun., Brechin; Dr. Alexander, Forfar. Several papers were read, and it was decided to present to the House of Commons a petition in favour of Sir Lyon Playfair's amendment to Clause 10 of the Medical Act Amendment Bill.

ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting held at 3, New-inn, on the 9th inst., Dr. Robert Collum was elected Chairman, and Mr. Joseph Smith, of Rickmansworth, Vice-Chairman of the Committee of this Association. Great satisfaction was expressed at the progress which is being made in obtaining signatures to the petition both in London and the provinces, and at the hearty manner in which the local secretaries are aiding the object. A letter was read from Dr. Bruce Clarke, Hon. Secretary to the Association of Fellows, saying that the Fellows' Association is preparing a general scheme of reform, and asking to be informed of the views of the members. It was decided to hold a meeting at Belfast during the visit of the British Medical Association to that place.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ATKINSON, CHARLES S. ABBOTT, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Fourth District of the East Ashford Union.

CREAGH, WILLIAM, M.R.C.S., has been appointed Medical Officer for the Clifton District of the Tamworth Union.

DAVIS, ARTHUR N., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Assistant Medical Officer to the Second County Asylum, Forston, Dorsetshire, vice Henry George Peacock, resigned.

FAULKNER, HERBERT, L.R.C.P.Ed., has been appointed Medical Officer for the Seventh District of the Depwade Union.

GLYNN, T. R., M.D.Lond., F.R.C.P., Physician to the Royal Infirmary, Liverpool, has been elected to the Professorship of Medicine in the Medical Faculty of University College, Liverpool.

HULL, E. GORDON, M.D., B.S.Dub., has been appointed Medical Officer for the Withern District of the Louth Union.

JOLLY, SAMUEL AIRD, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Paddlestown District of the Dorchester Union.

JONES, J. T., L.R.C.P.Ed., has been appointed House-Surgeon to the Flintshire Dispensary, vice Witham, resigned.

LYNAM, R. G., M.R.C.S., L.S.A.Lond., has been appointed House-Physician to the North Staffordshire Infirmary.

MURPHY, JAMES, B.A., M.D.Dub., &c., has been appointed Honorary Surgeon to the Sanderland General Infirmary, vice Dr. Ayr Smith, resigned.

PAIRMAN, THOMAS WYLD, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Fifth District of the Williton Union.

ROBINSON, CHARLES H., M.C.P., F.R.C.S.I., has been appointed Medical Examiner to the Equitable Life Assurance Society, for Dublin and District.

SAVILL, THOMAS D., M.D., M.R.C.P.Lond., has been elected an Assistant-Physician to the West London Hospital, vice Theodore Dyke Acland, M.A.Oxon., M.R.C.P.Lond., resigned.

SCANLAN, A. DE COURCY, M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the Westminster Hospital.

STONES, THOMAS, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Misterton District of the Gainsborough Union.

STOTT, HUGH, M.R.C.S., L.M., L.S.A.Lond., has been appointed Medical Officer of Health to the Friern Barnet Local Board.

WELSH, R. C., M.B., C.M.Ed., has been elected Assistant House-Surgeon to the Liverpool Dispensaries, vice Hadden, M.D., M.Ch., &c., resigned.

Births, Marriages, and Deaths.

BIRTHS.

HOWARD.—On the 6th inst., at Littleport, Isle of Ely, the wife of Wilfred Howard, L.R.C.P.Ed., M.R.C.S.Eng., of a son.

KIRKPATRICK.—On the 30th ult., at Clifton Villa, Alverstoke, Hants, the wife of Surgeon H. C. Kirkpatrick, M.D., Army Medical Staff, of a son.

POWELL.—On the 4th inst., at Seagrave-place, Cheltenham, the wife of W. Powell, M.R.C.S., of a son.

SHAW.—On the 1st inst., at Nicholas-street, Chester, the wife of Frank Herbert Shaw, M.R.C.S., of a daughter.

STEVENSON.—On the 7th inst., at Sandhurst Lodge, Gresham-road, S.W., the wife of Thomas Stevenson, M.D., F.R.C.P., of a daughter.

TICEHURST.—On the 3rd inst., at Silchester House, St. Leonards-on-Sea, the wife of A. B. Ticehurst, M.R.C.S. &c., of a son.

MARRIAGES.

CARNELLEY—HIGGINBOTTOM.—On the 8th inst., at St. Paul's Church, Withington, by the Rev. J. G. Denison, M.A., Matthew Carnelley, L.R.C.P., M.R.C.S., of Ruddington, Notts, third son of William Carnelly, of Fallowfield, to Jessie, younger daughter of the late Isaac Higginbottom, of Withington.

HARLAND—BAKER.—On the 3rd inst., at St. Pancras Parish Church, Henry Harland, M.D., of Tunbridge Wells, to Emmeline, second daughter of the late Henry Baker, F.R.I.B.A., of Gower-street.

THANE—KLINGBERG.—On the 5th inst., at the English Church, Heidelberg, George Dancer Thane, Professor of Anatomy in University College, London, to Jenny Anna Charlotta, eldest daughter of August Klingberg, of Stockholm, and cousin of Geheime Rath Professor A. von Bulmerincq, of Heidelberg.

WRIGHT—ANDREW.—On the 3rd inst., at the Parish Church, Fowey, Cornwall, Edward Wright, Surgeon, of Ollerton, youngest son of the late William Wright, Surgeon, of Pelham-street, Nottingham, to Catherine Bellman, youngest daughter of the late John Andrew, of Tregaminion, Cornwall.

DEATHS.

HEWARD.—On the 29th ult., at Bath, John Mitchell Heward, Surgeon, of Stamford, aged 54.

LA FARGUE.—On the 2nd inst., at Farncombe, G. F. H. La Fargue, M.D. St. And., aged 48.

WALKER.—On the 6th inst., at his residence, Ynysfaig House, near Dolgelly, and late St. James's-place, St. James's-street, London, George Alfred Walker, M.R.C.S. & L.S.A.Lond, aged 77.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

A PROSPECTUS of the arrangements in connexion with this institution for the sessions 1884-85 has been recently issued. As its name implies, the school is intended solely for legally qualified practitioners, no undergraduates being admitted, and no degrees being conferred. It is specially available for young graduates who wish to acquaint themselves with the practical duties of their profession, or for older practitioners who are desirous of taking up some special branch of medicine, or who wish to familiarise themselves with the modern advances in diagnosis and treatment. The instruction is given by means of clinics, subjects, and specimens. There are no lectures, except clinical lectures, and no demonstrations without subjects and specimens; the cases are not hurriedly seen and superficially examined, and each student has the most ample opportunities for making personal and deliberate examinations of individual cases. That the need of such an institution has been felt is evident from the fact that in the first session the number of medical men attending the courses was 100, a number increased in the second session to 113.

"BOILED LETTUCES."

To the Editor of THE LANCET.

SIR,—In the number of THE LANCET for June 28th, at page 1175, the statement is made that "spinach is necessarily excluded from the diet of the exaluric patient." As a matter of some importance in the dieting of such patients, I shall be glad to know the facts on which this statement is founded.

I am, Sir, yours obediently,

July 7th, 1884. JOHN M. BALFOUR.

*** The word "necessarily" was an error in the sentence quoted. We meant to instance the *fact*, not to adopt or defend it. We should like to see this question discussed on the basis of *facts* in science. The Salsolaceæ (or Chenopodiaceæ) are characterised by the presence of a large quantity of alkali in their composition; this is combined with an organic acid. Spinach (Spinacia oleracea) and beet (Beta vulgaris) are prominent among the esculent plants of the order. A notable specimen of the family is Chenopodium quinoa, which is used as food in Peru, and called petty rice. It has the smallest starch grains known. Now, oxalic acid is obtained by the action of nitric acid on sugar or potato starch. Beet sugar will do as well as any other for this purpose, and as beet and spinach belong to the same order, spinach comes to be condemned. Moreover, spinach sometimes contains a good deal of lime, though not nearly as much as rhubarb, bistort, and many of the lichens. We confess it is not by any means plain to us why spinach should be singled out for a special anathema when beet-root and potato are not interdicted, and rhubarb is often, though obviously most improperly, allowed, or the blunder of taking it condoned. We fancy that if the objection to spinach specifically came to be scrutinised very closely, it would be found to have for its origin an impression that the "grit" so often found in imperfectly washed spinach is oxalate of lime, which, speaking generally, is not the fact.—ED. L.

A.B.C.—The operation was first deliberately and definitely advised by Paul Barbette in 1672. The first recorded operations are one by Theophilus Bonetus in 1700, and one by Veise in 1751.

"A TAILED CHILD."

To the Editor of THE LANCET.

SIR,—The case referred to in your issue of last week reminds me of one I published in your journal in 1866, a photograph of which was also attached. The tumour was successfully removed by knife and écraseur.

I am, Sir, yours truly,

Donington, July 5th, 1884. E. W. JOLLYE.

Enquirens.—No; a doctor cannot legally claim a fee for giving evidence at an inquest held to investigate the cause of death of a person who died in the waiting-room of a hospital or dispensary. The fact of the inquest being conducted at another place than where the death occurred does not entitle the medical man to remuneration for his services.

"MIDWIFERY."

To the Editor of THE LANCET.

SIR,—In the course of a working-class town practice, at one time very large, I had a similar experience to that of "Somnolens" in the country. I have long held a theory to account for it, which I am induced to mention. Without denying the influence of the excitement, &c., often attending the Saturday night, I believe the principal cause is the greater frequency of coitus on that evening than on any other of the week. When we consider that it is not only a time of unusual enjoyment, but the beginning of the most considerable period of rest throughout the week, the tendency to indulgence in this direction must be evident; indeed, I have no doubt of the fact. The effect of coitus in stimulating the uterus to contraction is very marked in many females towards the end of pregnancy. It is often immediately followed by contractions described as "movements," "risings," &c., during which the abdomen may be felt to become hard when the hand is placed over it. I have known such contractions produce rupture of the membranes, shortly followed by regular labour. With respect to the suggestion that the greater frequency of labour at this time is due to the greater amount of work performed by women on Saturday, it may be doubted if such is really a fact. Nay, the very opposite might be maintained. We all know how frequently "washing-day" seems to act as the exciting cause of parturition, and, for obvious reasons, this is seldom or never Saturday. I am, Sir, yours truly,

Partick, Glasgow, June 30th, 1884. ROBERT KIRK, M.D.

To the Editor of THE LANCET.

SIR,—Having carefully gone through a book of register of births for the past quarter in our district, it may interest "Somnolens" to learn that the births were as follows:—Saturday, 82; Sunday, 74; Monday, 62; Tuesday, 61; Wednesday, 77; Thursday, 65; Friday, 79; total, 500.

I am, Sir, yours truly,

July 1st, 1884. STATISTICS.

EPIDEMIC SPASMODIC COUGH (?) OF SEPTIC ORIGIN.

To the Editor of THE LANCET.

SIR,—Can any of your readers give me information as to the nature and most appropriate treatment of the coughs that have been prevalent during the last three or four months? In each case under my care there have been loss of voice first of all, followed by irritation of the throat about the upper part of the sternum, and a dry spasmodic cough, like whooping-cough, only without the whoop. Sometimes these are followed, after the lapse of two or three weeks, by thick copious expectoration, night sweats, and loss of appetite. The temperature keeps rising and falling irregularly, and seems to indicate some septic origin. In the first stages, alkalies and diaphoretics seem to do some good, but in the later no treatment seems to be of much avail. The only thing that appears to be of service is Fletcher's syrup of the hydrobromate of iron and quinine. I have not seen anything exactly like the present epidemic before, and I shall be glad of some information on the subject. Other medical men I find are as much puzzled as I am.

I am, Sir, your obedient servant,

Surbiton, July 7th, 1884. F. P. ATKINSON.

Mr. Musgrave.—We know of no such commission.

Holifield has not enclosed his card.

"SISTER GRACE."

To the Editor of THE LANCET.

SIR,—While thanking you for your generous remarks on "Sister Grace," I am afraid I cannot lay claim to the lofty motives you ascribe to me. I chose the subject of hospital life because, from a dramatic point of view, it was unused ground. A play having "the accident room" as the scene of two acts, and its chief characters drawn from hospital servants, has, at any rate, something novel about it. In seeking novelty I trust I have not been guilty of bad taste. Of course, the incidents occurring in "Sister Grace" are not of ordinary occurrence in our hospitals; but that such incidents may, and do, occur few will deny. In dealing with such a risky subject as hospital life I had to avoid any but the mildest realism, trusting instead to the comedy and pathetic element; and as love in some form is the central motive of all plays, it was essential to introduce a strong love element. I confess in representation this element seemed rather too obtrusive. "Sister Grace" was never intended to represent a complete orthodox picture of hospital life, and, full of faults as it doubtless is, it contains no ill-natured satire; and though the hospital characters were not intended to be perfect men and women, they were, I trust, human, and not unfitted for the positions they were supposed to hold. In short, and speaking as a medical man, I hope I am guiltless of all mud-throwing, either at my professional brethren or at institutions as dear to me as to them. From the reception accorded to "Sister Grace" on its production, and subsequently by the press, I feel I have no reason to be ashamed of my first dramatic child.

I am, Sir, yours truly,

July 9th, 1884. THE AUTHOR OF "SISTER GRACE."

"RUPTURE OF THE URINARY BLADDER."

To the Editor of THE LANCET.

SIR,—As your reviewer of my little volume on "Rupture of the Urinary Bladder" has attributed to the publishers, without reason, certain heinous offences which they have not committed, I must ask you to allow me to perform an act of justice, and bare the breasts of the real culprits for the reception of his deadly shafts. For any closeness of print and smallness of type of which your reviewer complains I am alone responsible, having been obliged to submit to the common-place necessity of proportioning my outlay on the work to the means at my disposal. It is painfully known to medical writers, if not to reviewers, that a distinctly literary work on a special and very limited subject is practically a "gift-horse" to the profession, and cannot be expected to return, directly or indirectly, to the author more than a fraction of the expenses. Hence their poverty, but not their wills, may compel them to present their sterile labours to the profession in a form less convenient to readers than otherwise they would have been glad to select. What your reviewer terms the "remarkable intercalation of a list of the author's published writings between the text and the index" was perpetrated by the printers, whose untutored minds were evidently unconscious of the existence of those thin partitions between propriety and impropriety to which the higher professional mind is so sensitively alive. Unfortunately, it is too late to rectify this momentous error in the present edition; but it may tend to mitigate its evil consequences if I point out that the so-called "advertisement" was inserted in this literary work as a literary notification for literary reference and literary purposes only, and that it is absolutely and, if need be, demonstrably free from any tinge of that commercial element which is generally considered to be the objectionable feature in the advertisement of professional works. I am, Sir, yours faithfully,

Finsbury-square, July 7th, 1884. WALTER RIVINGTON.

J. H.—We do not call to mind a book which treats the matter so generally as that mentioned.

MEDICAL EXAMINATIONS.

To the Editor of THE LANCET.

SIR,—The question has often been raised whether examinations really test a man's knowledge and ability. Now, when the subject of overwork is occupying so much of the attention of the public, I should like to say a few words on this subject.

At the last Second M.B. Examination of the University of Cambridge a large number of candidates presented themselves. I have the pleasure of knowing two or three who went up from town after passing their "First College." They have all been unsuccessful in the anatomical and physiological part of the examination. On the other hand, men have got through who were just before rejected at the College of Surgeons. If examinations are any test, and not merely dependent on luck, this anomalous state of things ought to come to an end. It is only right that the standard of the M.B. Examination should be comparatively high. But certainly there is a limit to everything. In the physiology paper I see a question requiring the candidate to "describe the course of the nerves which are known to act upon the heart in the case of the dog or the rabbit." I suppose the so-called "accelerator nerves" are specially meant. Are Second M.B. candidates expected to possess a sound knowledge of comparative anatomy and physiology as well as human? If so, it is only fair that this should be stated in a schedule, so that candidates (especially those who go up from town) may, at all events, have an idea of what to expect. Looking over some of the London First M.B. (Honours) papers, I fail to find anything like the above question, though the London University gives its candidates a distinct schedule, and includes embryology. I am, Sir, yours faithfully,

July 8th, 1884. FAIRPLAY.

C. F. W.—Haviland's Chart, published, we think, by Stanford, Charing-cross.

UNUSUAL ACCIDENT WHILE BOWLING.

To the Editor of THE LANCET.

SIR,—The following being, I believe, a rare accident in one so young, seems worthy of record. The other evening I was called to see a young gentleman, aged sixteen, of slender build but athletic habits, who, while bowling overhand at cricket, suddenly felt a severe pain in the right groin. On examination, a direct inguinal hernia was found on the right, extending half way down into the scrotum. Pain being severe, a quarter of a grain of morphia was injected, and with some difficulty the bowel returned. Beyond temporary retention of urine, requiring the catheter once, he had no symptoms afterwards. There had been no previous hernia, but both external rings were larger than normal. Believe me, Sir, yours truly,

Leeds, June 27th, 1884. T. J. HUDSON, M.D., L.R.C.P.Lond.

REMUNERATION OF MEDICAL MEN.

To the Editor of THE LANCET.

SIR,—I enclose the following cutting from a medical journal. How, I ask, can qualified men be so indifferent to their social status as to underrate the value of their services by undertaking such duties at so ridiculous a remuneration?—I am, Sir, yours obediently,

Halstead, July 7th, 1884. A UNIVERSITY MAN.

"Wanted, qualified in door Assistant. University man preferred. To assist in small practice and also in a chemical laboratory. Must know something of practical chemistry. Salary about £30, according to suitability. Plenty of time for reading.—Address, —— ——."

Sanitas.—There is no hard-and-fast rule in the matter; but the Local Government Board have generally objected to a district medical officer undertaking another official appointment which takes him away from the localities where he has his Poor-law duties to fulfil.

PARACENTESIS FOR PLEURITIC EFFUSION.

To the Editor of THE LANCET.

SIR,—The following incomplete history of a case may prove of interest to some of your readers, should you consider it worth publishing.

Last July I was called to see a patient, and found him with his left thorax completely full of fluid. Unfortunately, I was very busy, and took no notes of the case at the time. However, at two operations I withdrew with the aspirator the whole of the fluid; the lung expanded very fairly, and the man made a good recovery, up to a certain point, when he insisted, contrary to my advice, upon going to work. I saw nothing more of him till the beginning of last month, when he came to my surgery, having been at work up to that day. He complained of nothing except that he had a lump on his back, which came suddenly about a week before. On stripping him, I found a swelling as big as a child's head, extending from the mid axillary line on the left side below the left scapula to the middle line of the back. Stethoscopically there was nothing to be made out, except a few friction sounds towards the base of the lung, which seemed to have quite recovered its normal state of expansion. His temperature was 99·2°. I had not the means to dress the swelling purely antiseptically, and so punctured it under a curtain of lint soaked in carbolic oil. I withdrew about a pint and a half of flaky serous fluid, and again applied carbolised lint. All went well until the fourth day, when I found my patient very feverish—temperature 103·6°—with an anxious expression of countenance, and he informed me he had had several rigors. On removing the dressing I found the wound discharging almost pure pus. I ordered a purge and a mixture containing five grains of quinine every four hours. He had no more rigors, and has been gradually improving ever since. The wound, however, has not yet closed, although it appears to be doing so, as I cannot pass the probe nearly so far amongst the tissues as I could a fortnight ago. I have no doubt that had the man remained quietly at home after the first operation until he had permission to work, he would have made a satisfactory and complete recovery.

The point that strikes one as peculiar is that such a collection of fluid could have gone on forming, and have finally forced its way out of the pleural cavity, without giving rise to more urgent symptoms. The man assured me that he had been at work the whole seven months that I had lost sight of him, and that he had been quite well, except a slight shortness of breath and a sudden pain in his side shortly before he noticed the swelling.

I am, Sir, yours truly,

Long Sutton, June 9th, 1884. J. EDWARD SMITH, M.R.C.S., &c.

THE POLLUTION OF THE THAMES.

To the Editor of THE LANCET.

SIR,—Yesterday a party of us left London-bridge Pier by the morning Southend steamer, in order to have a day's rest in fresh open air. We had not reached Barking Creek before all on board were sickened by a "deadly insidious odour" arising in the form of sewer-gas, which continued without intermission for miles, polluting the air as well as the water of our deservedly so-called "noble river." This, I am informed, has been so for years past, and is gradually getting worse, and simply caused by the horrible system of discharging London sewage into the river at low, instead of high water, and so keeping it in the river, instead of its being carried right away to sea. This, in our century! whilst all England is full of a great Health Exhibition. Is our national spirit dead to allow our countrymen and women to be thus literally poisoned without a voice being raised in protest?

Sir, your are the representative of a great health journal, and I sincerely trust that by your giving this matter publicity something may be speedily done to remedy the evil.—Yours obediently,

July 9th, 1884. ONE OF THE PEOPLE.

M. P. M. (Bombay).—We have no practical knowledge of the effect of the agent, but think it very unlikely to be of any value as a preventive of contagion.

"SHOULD ENTERIC FEVER CASES BE ISOLATED?"

To the Editor of THE LANCET.

SIR,—All facts bearing on the above question are of great interest, so I venture to send the following.

Mr. and Mrs. R—— returned from Venice towards the end of March in this year to their home, a large and isolated house in the country. During their absence the house had been inhabited by six children with their governess, a sister-in-law of Mr. R——'s, and ten servants. On April 1st Mr. R—— was first seen, and presented well-marked symptoms of commencing enteric fever, certainly contracted in Venice. The diagnosis was afterwards fully confirmed, and the patient passed through a severe and typical attack of typhoid. Mr. R—— was nursed by three persons—his sister-in-law, mentioned as having been in the house during his absence, a trained nurse, and a sister who returned from abroad for the purpose. Of these three the two latter contracted typhoid, the nurse commencing on April 29th and the sister on May 5th. Every possible precaution had been taken with regard to disinfecting the excreta, &c. The rest of the household remained in good health.

I am, Sir, yours truly,

Burton-on-Trent, July 9th, 1884. HENRY E. BRIDGMAN.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

At the Anatomical and Physiological examinations for the diploma of Member, on June 27th, the following were the questions in Anatomy submitted, of which the candidates were required to answer four (and not more than four) from 1 to 3 P.M.:—

1. Describe the elbow-joint.
2. Describe the dissection necessary to expose the extensor brevis digitorum from its origin to its insertion.
3. Give the attachments and nerve-supply of the two pterygoid muscles. What structures are in relation with the external pterygoid?
4. Describe the dissection required to expose the middle third of the back of the forearm as far as the bones and interosseous membrane.
5. Describe the cæcum, giving its investments, relations, and blood-supply.
6. Give the course and relations of the first part of the right subclavian artery. Enumerate the arteries with which its branches anastomose.

The following were the questions in Physiology:—

1. Describe one complete cycle of the heart's action. Give the relations of the sounds and impulse to the several events you name.
2. Give an account of the structure of a small bronchial tube. Assign to each of the textures its function, and explain its exact mode of action.
3. Describe the structure of the mammary gland. State the facts which tend to prove that milk is a secretion, and not the result of filtration.
4. Explain the mechanism of reflex and of voluntary micturition.
5. Describe the structure of a lymphatic gland. What is known of its function? Give the facts on which your statements rest.
6. What are the physical and chemical changes that accompany the contraction of striated muscle?

"BURIED ALIVE."

To the Editor of THE LANCET.

SIR,—I venture to trouble you with a few further remarks on this subject, as I wish to correct mistakes as to matters of fact in Dr. D. J. Williams's letter in the last issue of THE LANCET. I leave matters of opinion to others.

Firstly: "He describes the condition of the remains as if he had seen them." The fact is I did see them. Secondly: "The anomaly was seen by the sexton only." This is not true, independently of me. For, on seeing the strange condition of the remains, the sexton at once went to my servant-man, who immediately went and saw them. He then came and told me. I went and asked a medical man to go with me to see them, which he did. My servant saw them exactly as they were when the grave was opened. When the surgeon and I saw them the protruding limbs had been replaced in the coffin. Thirdly: I think I had "inquired" pretty "carefully" before I wrote to THE LANCET. I did not say that the coffin had not been screwed down, but that it was "possible" it might not have been. This, however, I corrected in my second letter to THE LANCET of June 7th, which Dr. Williams appears not to have seen. Fourthly: I did not express the opinion that the deceased had been buried alive, but wished to invite scientific men to explain the facts, and to tell us whether it was possible it might have been so. Fifthly: Dr. Williams is misinformed as to the quantity of water in the cemetery. I have taken funerals for seventeen years in all kinds of weather and have never seen any water in a grave. The son of a former sexton tells me he has seen a little water occasionally.

My second letter to THE LANCET mentions the fact which Dr. Williams mentions as if it were new, that the woman died on a Monday and was buried on the Friday following. I am glad to have elicited a number of letters to THE LANCET which prove beyond reasonable doubt that in this case the deceased was really dead when she was buried. Some of them, however, prove that cases of being buried alive have sometimes occurred. I may mention that I observed in the cemetery at Munich some years ago several dead bodies lying in coffins in a dead-house with a glass enclosure, exposed to public view, and was informed that the law required that no one should be buried till the body had first lain for three days in the dead-house. This, doubtless, was a precaution against burying alive.

I am, Sir, yours truly,

Vicarage, Llanelly, July 8th, 1884. DAVID WILLIAMS.

Mr. T. Strugnell.—1. It is for the coroner to decide whether a post-mortem examination is necessary.—2. Yes, it is competent for a jury to return a verdict of "Death from natural causes" when the medical evidence is that death may have resulted from poison. It is quite within their discretion, but we doubt the wisdom of such a finding.—3. We know of no special work, but the line of practice is well defined. Report the facts of the case to the coroner.

W. H. B.—We think our correspondent acted quite rightly, and, making due allowance for the "uncertainty of the law," that he would recover.

SUNSTROKE IN CHILDREN.

SIR,—I have this morning been called to a case of sunstroke in a young child. I send this notice as a caution to all who have charge of children.

I am, Sir, yours truly,

Pembridge-square, July 3rd, 1884. H. BOOTHBY DOW, M.D.

A DAY'S HOLIDAY.

WE are asked to state that in order to give 300 children and 100 poor women, members of mothers' meetings, an escape for one day from the heat and noise of South London into the fresh air and quiet of the country, donations may be sent to the Rev. J. W. Pitchford, St. Jude's Vicarage, Southwark, S.E.

Mr. Ernest W. Haydon.—We are not aware that the point has been raised.

Mr. A. Thomson Drake.—We are unable to extend our free list.

CORRIGENDA.—In the description of Dr. Blaikie Smith's Ether Inhaler, as published on July 5th, for "economical of the anæsthesia," read economical of the anæsthetic; and in the explanation of the woodcut, for "A, Respiratory valves," read A, Inspiratory valves.—In the Paris letter of June 28th, page 1184, in the tenth line from the bottom, for the word "frame" read *flame;* and in the succeeding paragraph, for Dr. "Harriot" read Dr. *Hanriot.*

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Henry Thompson, London; Dr. Colcott Fox, London; Mr. Boothby Dow, London; Dr. Cameron, Huddersfield; Dr. Wakefield, Aix-les-Bains; Mr. Balfour, Brighton; Mr. J. Campbell, London; Mr. Jolliye, Donington; Mr. Haydon; Dr. Harkin, Belfast; Mr. Van Praagh, London; Mr. J. A. Philip; Mr. Powell, Beckenham; Mr. Pohl, Liverpool; Mr. D. Dinin, Paris; Dr. Ranking, Mean Meer; Dr. J. Seaton, Ospedaletti; Dr. H. N. Carter, Bombay; Mr. P. H. Kidd, West Hartlepool; Mr. J. M. Balfour; Messrs. Sleeman and Co., London; Mrs. Fedarb, London; Mr. Day, Aden; Mr. Browne, London; Mr. McDonald, Manchester; Dr. Le Grande, Queen's-town; Mr. Davies, Tenbury; Dr. Wyer; Mr. Bara, Shrewsbury; Mr. Blora, Leeds; Mr. Collins; Dr. Hart, Corby; Mr. West, Bickley; Mr. Grant, Birmingham; Mr. Armstrong, Manchester; Messrs. Kegan Paul and Co., London; Messrs. Burgoyne and Co., London; Mr. Douglas, Sunderland; Mr. Worton, Pontypool; Mr. Smithson; Dr. Hale White, London; Dr. Althaus, London; Mr. Butlin, London; Mr. T. E Gibb, London; Dr. Blaikie Smith, Aberdeen; Mr. Lawson Tait, Birmingham; Mr. Pulbrook, London; Dr. Robertson, Kimberley; Mr. J. St. T. Clarke, Leicester; Rev. D. Williams, Llanelly; Dr. Lunn, London; Mr. F. Guthrie; Mr. Bridgman; Rev. J. W. Pitchford, London; Dr. Dickenson; Mr. Forbes, Blairerno; One of the People; M.B.,C.M.; Physician; M.R.C.S.E., L.M., L.S.A.; Public Vaccinator, Cardiff; Medicus; Z., Birmingham; R. A. A.; Epsilon; M.D., Belper; J. H., London; J. D. B.; Sanitas.

LETTERS, *each with enclosure,* are also acknowledged from—Mr. Crassweller, Clapton; Mr. Phillips, Hanley; Dr. Sutherland, Castlestown; Mr. Davidson, Appleby Magna; Mr. Rawling, Colchester; Mr. Jones, Carnarvon; Mr. Hankin, Dublin; Mr. Roberts, Croydon; Dr. Ashdown, Tetbury; Mr. Taylor, Retford; Dr. Muir, Bayswater; Dr. Scatliff, Brighton; Dr. Tashby, Guernsey; Dr. Waller, Peterborough; Mr. Bridgman, Gladbarn; Mr. Fenwick, Dansford; Mr. Long, Blackburn; Mr. Greenwood; Dr. B. Smith, Aberdeen; Mr. Rollin, Jersey; Mr. Tattersall, Victoria; Mr. Orde; Dr. Jennings; Mr. Matheson, Milford Haven; Mr. Carnelly, Manchester; Mr. Dukes, Rugby; Mr. Corbishly, Macclesfield; Mr. Gutteridge; Mr. Menzies, Edinburgh; Miss de Lütticham, Holloway; Mr. Lloyd, Yarmouth; Lady Superintendent; M. T.; J. W., Oldham; Epsilon; M.D., South Kensington; L.R.C.S.I., Southwark; Albuminus, Plymouth; Beta; H. S., Limehouse; M.D., Manchester; Anglican; J. F. M. B., Leicester; Lindsey; J. M. F.; C. O. R., Barnsley; Oran; Omega; M.R.C.S., King's College; Fargo; Gargantua; S. C.; H. B. M., Clapham; Forceps; Alpha; Zeta.

Liverpool Courier, Glasgow Evening Citizen, Malton Gazette, Bromley Telegraph, Hull Express, Liverpool Echo, Dundee Advertiser, Aberdeen Evening Gazette, Kimberley Diamond Fields Advertiser, Manchester Guardian, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 10th, 1884.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July	4	29·92	E.	74	65	126	86	63	..	Bright
,,	5	29·94	E.	71	64	108	78	64	..	Hazy
,,	6	29·94	W.	68	60	116	71	58	·04	Cloudy
,,	7	30·03	S.W.	65	60	119	78	57	·71	Overcast
,,	8	29·94	S.E.	71	64	122	84	60	..	Hazy
,,	9	29·80	E.	73	65	122	84	65	..	Hazy
,,	10	29·64	S.E.	67	61	84	69	65	..	Raining

Medical Diary for the ensuing Week.

Monday, July 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, July 15.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, July 16.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, July 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, July 18.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, July 19.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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